

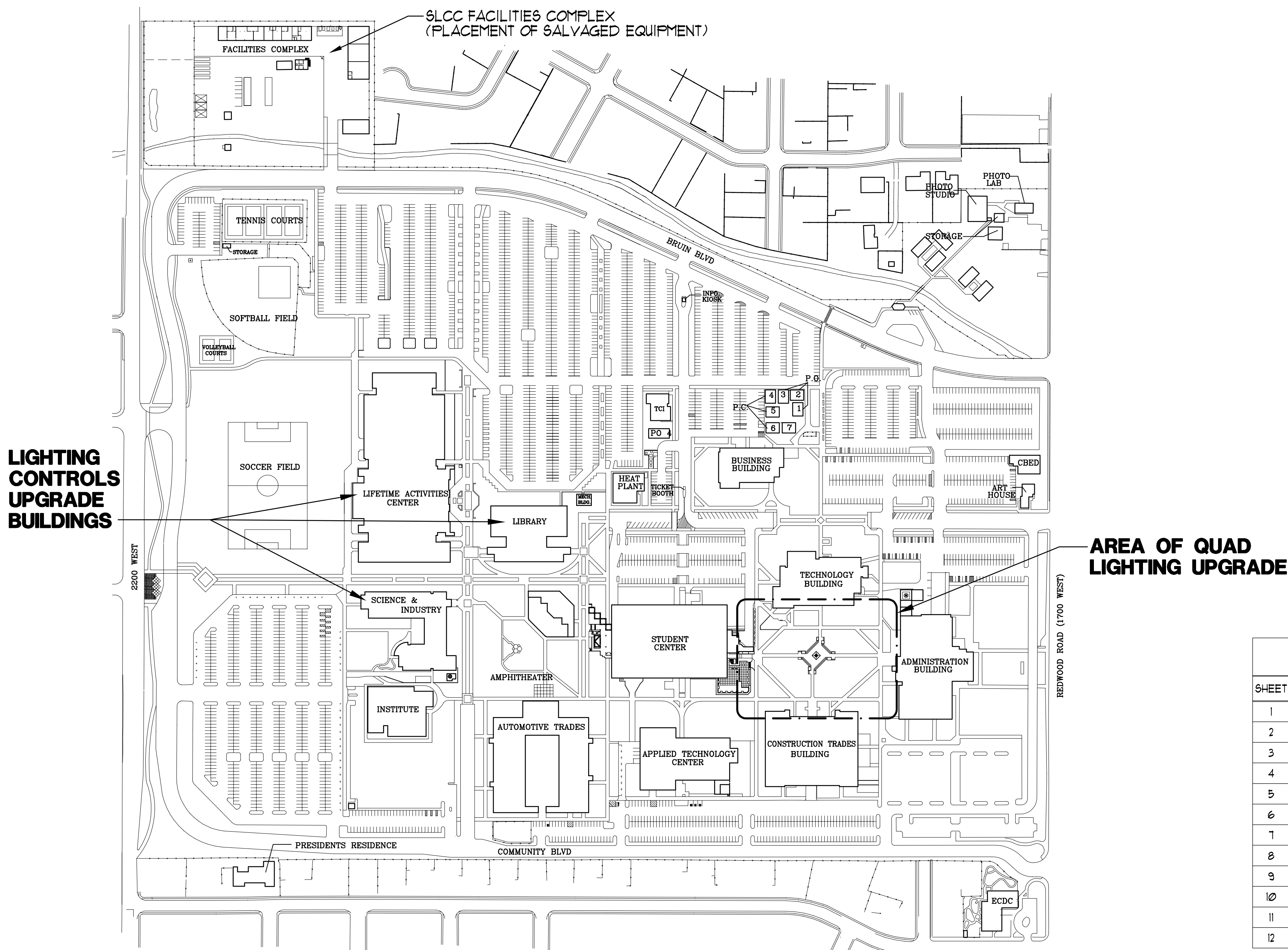
QUAD AREA LIGHTING AND
LIGHTING CONTROLS UPGRADES
DFCM PROJECT NO. 06106660



State of Utah-Department of Administrative Services

DIVISION OF FACILITIES CONSTRUCTION
AND MANAGEMENT

4110 State Office Building / Salt Lake City, Utah 84114 / 538-3018



SLCC REDWOOD ROAD CAMPUS PLAN
SCALE: 1" = 200'-0"



CODE ANALYSIS

APPLICABLE CODES			
	Year		Year
International Building Code	2006	National Electrical Code	2005
International Mechanical Code	N/A	Uniform Code for	
International Plumbing Code	N/A	Building Conservation	
International Fire Code	2006	ADA Accessibility	
International Energy Conservation Code	2006	Guidelines	N/A

A. Occupancy and Group: B
Change in Use: Yes No X Mixed Occupancy: Yes No X
Special Use and Occupancy (e.g. High Rise, Covered Mall):

B. Seismic Design Category: N/A Design Wind Speed: 30 mph

C. Type of Construction (circle one): Existing

I	I	II	II	III	III	IV	V	V
A	B	A	B	A	B	HT	A	B

D. Fire Resistance Rating Requirements for the Exterior Walls based on the fire separation distance (in hours):
North: N/A South: N/A East: N/A West: N/A

E. Mixed Occupancies: N/A Nonseparated Uses: N/A

F. Sprinklers: Existing - Varies by Building
Required: Provided: Type of Sprinkler System: Existing

G. Number of Stories: N/A Building Height: N/A

H. Actual Area per Floor (square feet): N/A

I. Tabular Area: N/A

J. Area Modifications:

$$a) A_s = A_1 + \left[\frac{A_1 I_1}{100} \right] + \left[\frac{A_1 I_2}{100} \right] \quad I_1 = 100 \left[\frac{F}{P} - 0.25 \right] \frac{W}{30}$$

b) Sum of the Ratio Calculations for Mixed Occupancies:
Actual Area ≤ 1
Allowable Area

c) Total Allowable Area for:
1) One Story: N/A
2) Two Story: A₂ (2) N/A
3) Three Story: A₃ (3) N/A
d) Unlimited Area Building: Yes No Code Section:

Element	Hours	Assembly Listing	Element	Hours	Assembly Listing
Exterior Bearing Walls	N/A		Floors - Ceiling Floors	N/A	
Interior Bearing Walls	N/A		Roofs - Ceiling Roofs	N/A	
Exterior Non-Bearing Walls	N/A		Exterior Doors and Windows	N/A	
Structural Frame	N/A		Shaft Enclosures	N/A	
Partitions - Permanent	N/A		Fire Walls	N/A	
Fire Barriers	N/A		Fire Partitions	N/A	
			Smoke Partitions		

L. Design Occupant Load: N/A
Exit Width Required: N/A Exit Width Provided: N/A

M. Minimum Number of Required Plumbing Facilities:
a) Water Closets - Required (m) N/A (f) N/A Provided (m) (f)
b) Lavatories - Required (m) N/A (f) N/A Provided (m) (f)
c) Bath Tubs or Showers: N/A
d) Drinking Fountains: N/A Service Sinks: N/A

- FOOTNOTES:
- In case of conflict with the U.S. Department of Justice Federal Registers Parts I through IX - ADA Guidelines and specific reference to the International Building Code Accessibility Chapters, the more restrictive requirement shall govern.
 - Additional Code Information shall be provided at the discretion of the Building Official for Complex Buildings. Including, but not limited to:
 - High Rise Requirements.
 - Airflows.
 - Performance Based Criteria.
 - Means or Egress Analysis.
 - Fire Assembly Locator Sheet.
 - Exterior and Interior Accessibility Route.
 - Fire Stopping, Including Tested Design Number.

DRAWING INDEX

SHEET NUMBER	SHEET TITLE
1	G-001 LOCATION PLAN, CODE CRITERIA, AND DRAWING INDEX
2	ED101 QUAD AREA LIGHTING - SITE DEMOLITION PLAN
3	ES101 QUAD AREA LIGHTING - ELECTRICAL SITE PLAN
4	ES601 QUAD AREA LIGHTING - SCHEDULES AND DETAILS
5	EL101 LIGHTING CONTROLS - LIBRARY LOWER 4 MAIN LEVELS ELECTRICAL PLANS
6	EL102 LIGHTING CONTROLS - LIBRARY SECOND ELECTRICAL PLAN
7	EL103 LIGHTING CONTROLS - LIFETIME ACTIVITY CENTER MAIN LEVEL ELECTRICAL PLAN
8	EL104 LIGHTING CONTROLS - LIFETIME ACTIVITY CENTER SECOND LEVEL ELECTRICAL PLAN
9	EL105 LIGHTING CONTROLS - LIFETIME ACTIVITY CENTER THIRD LEVEL ELECTRICAL PLAN
10	EL106 LIGHTING CONTROLS - SCIENCE/INDUSTRY LOWER 4 MAIN LEVELS ELECTRICAL PLANS
11	EL107 LIGHTING CONTROLS - SCIENCE/INDUSTRY SECOND 4 THIRD LEVELS ELECTRICAL PLANS
12	EL108 LIGHTING CONTROLS - PARTIAL TUNNELS ELECTRICAL PLAN

Internet: <http://dfcm.state.ut.us>

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PROJECT:

Salt Lake
Community
College

REDWOOD ROAD CAMPUS
4600 SOUTH REDWOOD ROAD
SALT LAKE CITY, UTAH

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STATE PROPERTY NO.: VARIOUS

CAD DWG FILE: G-001.dwg

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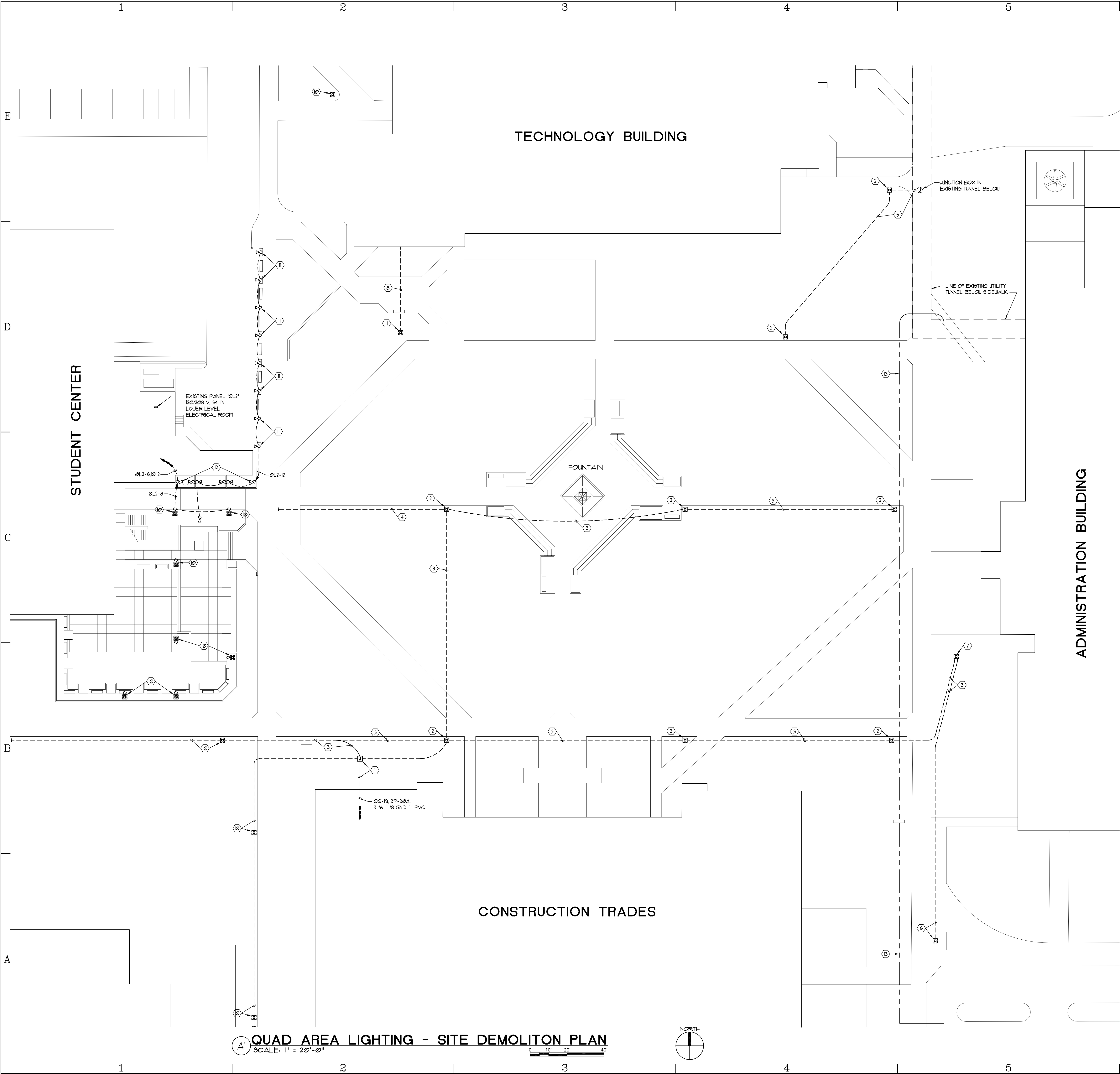
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LOCATION PLAN,
CODE CRITERIA,
AND DRAWING INDEX

SHEET NUMBER:

G-001

SHEET 1 OF 12



- GENERAL ELECTRICAL NOTES:**
- LOCATIONS OF ALL EXISTING ELECTRICAL EQUIPMENT, LIGHTING, SWITCHES, OUTLETS, BRANCH CIRCUIT WIRING, ETC., ARE BASED ON EXISTING BUILDING ELECTRICAL DRAWINGS AND FIELD OBSERVATION OF EXISTING SURFACE CONDITIONS. FIELD VERIFY EXISTING LOCATIONS AND CIRCUITING AND IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES WHICH MAY ADVERSELY AFFECT COMPLETION OF THE WORK.
 - DEMOLITION IS SHOWN FOR CONTRACTORS REFERENCE ONLY. FIELD VERIFY QUANTITIES AND LOCATIONS OF ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED. REMOVE ALL ABANDONED CONDUIT WIRING, JUNCTION BOXES, OUTLETS, LIGHT FIXTURES, EQUIPMENT, ETC. WHETHER SPECIFICALLY SHOWN OR NOT.
 - WHERE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT INTERRUPTS EXISTING BRANCH CIRCUITS TO EXISTING EQUIPMENT TO REMAIN, PROVIDE NEW CONDUIT AND WIRING AS REQUIRED TO RECONNECT THE EXISTING EQUIPMENT TO REMAIN.
 - ALL MATERIALS AND EQUIPMENT REMOVED SHALL BE DISPOSED OF BY THE CONTRACTOR EXCEPT FOR ITEMS SPECIFICALLY NOTED TO BE SALVAGED FOR OWNER. CONTRACTOR TO PLACE SALVAGED MATERIALS IN STORAGE AT THE SLOC FACILITIES COMPLEX LOCATED AT THE NORTHEAST CORNER OF THE REDWOOD ROAD CAMPUS AS DIRECTED BY THE OWNER.
 - TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDINGS AND FACILITIES. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER.
 - REPLACE GRASS 60D DISTURBED BY EXCAVATION WITH NEW GRASS 60D IN ACCORDANCE WITH SPECIFICATION SECTION 02170.
 - TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING UNDERGROUND UTILITIES. IMMEDIATELY REPAIR ANY DAMAGE TO EXISTING UNDERGROUND IRRIGATION SPRINKLER SYSTEM, SPRINKLER CONTROL WIRING, WATER LINES, AND OTHER UNDERGROUND UTILITIES.
 - OBTAIN CURRENT UTILITY PLAN FROM SALT LAKE COMMUNITY COLLEGE PRIOR TO PERFORMING ANY EXCAVATION.

- KEYED NOTES:**
FOR SHEET ED101 ONLY
- EXISTING UNDERGROUND JUNCTION BOX AND LIGHTING BRANCH CIRCUIT HOMERUN TO REMAIN.
 - REMOVE EXISTING 12 FT LIGHT POLE AND FIXTURE AND SALVAGE FOR SLOC. REMOVE EXISTING CONCRETE POLE BASE COMPLETE AND RESTORE LANDSCAPING TO MATCH SURROUNDING LANDSCAPING.
 - REMOVE EXISTING 3 1/2" 1 1/2" GND. FROM EXISTING 1" UNDERGROUND CONDUIT. REMOVE ALL CONDUIT EXPOSED BY EXCAVATION AND ABANDON REMAINING CONDUIT IN PLACE.
 - EXISTING ABANDONED UNDERGROUND CONDUIT. REMOVE ALL CONDUIT EXPOSED BY EXCAVATION AND ABANDON REMAINING CONDUIT IN PLACE.
 - REMOVE EXISTING WIRE FROM EXISTING UNDERGROUND CONDUIT COMPLETE TO JUNCTION BOX IN TUNNEL BELOW SIDEWALK. REMOVE ALL CONDUIT EXPOSED BY EXCAVATION AND ABANDON REMAINING CONDUIT IN PLACE. PROVIDE WATERTIGHT CAP ON ABANDONED CONDUIT INTO TUNNEL.
 - EXISTING LIGHT POLE AND FIXTURE TO BE REMOVED AND REINSTALLED UNDER CONCURRENT TUNNEL EXTENSION PROJECT. RECONNECT FIXTURE AS SHOWN ON SHEET ES101.
 - REMOVE EXISTING 12 FT LIGHT POLE WITH RECEPTACLE AND FIXTURE AND SALVAGE FOR SLOC. REMOVE EXISTING CONCRETE POLE BASE COMPLETE AND RESTORE LANDSCAPING TO MATCH SURROUNDING LANDSCAPING.
 - REMOVE EXISTING WIRE FROM EXISTING UNDERGROUND CONDUIT TO FIRST JUNCTION BOX IN TECHNOLOGY BUILDING. RETAIN EXISTING CONDUIT AND CIRCUIT FOR CONNECTION TO NEW RECEPTACLE ON NEW LIGHT POLE AS SHOWN ON SHEET ES101. FIELD VERIFY EXISTING CIRCUITING PRIOR TO REMOVING LIGHT POLE.
 - INTERCEPT EXISTING 1" UNDERGROUND CONDUIT AND EXTEND TO EXISTING UNDERGROUND JUNCTION BOX. PROVIDE NEW 3 1/2" 1 1/2" GND. FROM EXISTING JUNCTION BOX TO EXISTING LIGHT POLE AND RECONNECT EXISTING CIRCUIT.
 - EXISTING LIGHT POLE, FIXTURE, AND UNDERGROUND CIRCUIT TO REMAIN. SHOWN FOR REFERENCE ONLY.
 - REMOVE EXISTING METAL HALIDE FLOODLIGHT WITH IN-GROUND BALLAST BOX AND SALVAGE FOR SLOC. REMOVE ALL EXISTING WIRING. RETAIN EXISTING UNDERGROUND CONDUIT FOR CONNECTION TO NEW FLOODLIGHTS AS SHOWN ON SHEET ES101.
 - EXISTING FLOODLIGHT, BALLAST BOXES, CONDUIT AND WIRING TO REMAIN. SHOWN FOR REFERENCE ONLY.
 - AREA OF UTILITY TUNNEL EXTENSION FROM ADMINISTRATION BUILDING TO CONSTRUCTION TRADES BUILDING TO BE CONSTRUCTED UNDER A CONCURRENT CONSTRUCTION CONTRACT. CONTRACTOR TO COORDINATE CONSTRUCTION SCHEDULE WITH UTILITY TUNNEL PROJECT TO PERFORM WORK IN THIS AREA TO AVOID CONFLICTS WITH UTILITY TUNNEL PROJECT.

- CONSTRUCTION SEQUENCE:**
- INSTALL NEW QUAD AREA LIGHT POLES AND FIXTURES AND VERIFY PROPER OPERATION PRIOR TO REMOVAL OF EXISTING LIGHT POLES AND FIXTURES.

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QUAD AREA LIGHTING
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UPGRADE

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STATE PROPERTY NO.: VARIOUS

CAD DWG FILE: ES101.dwg

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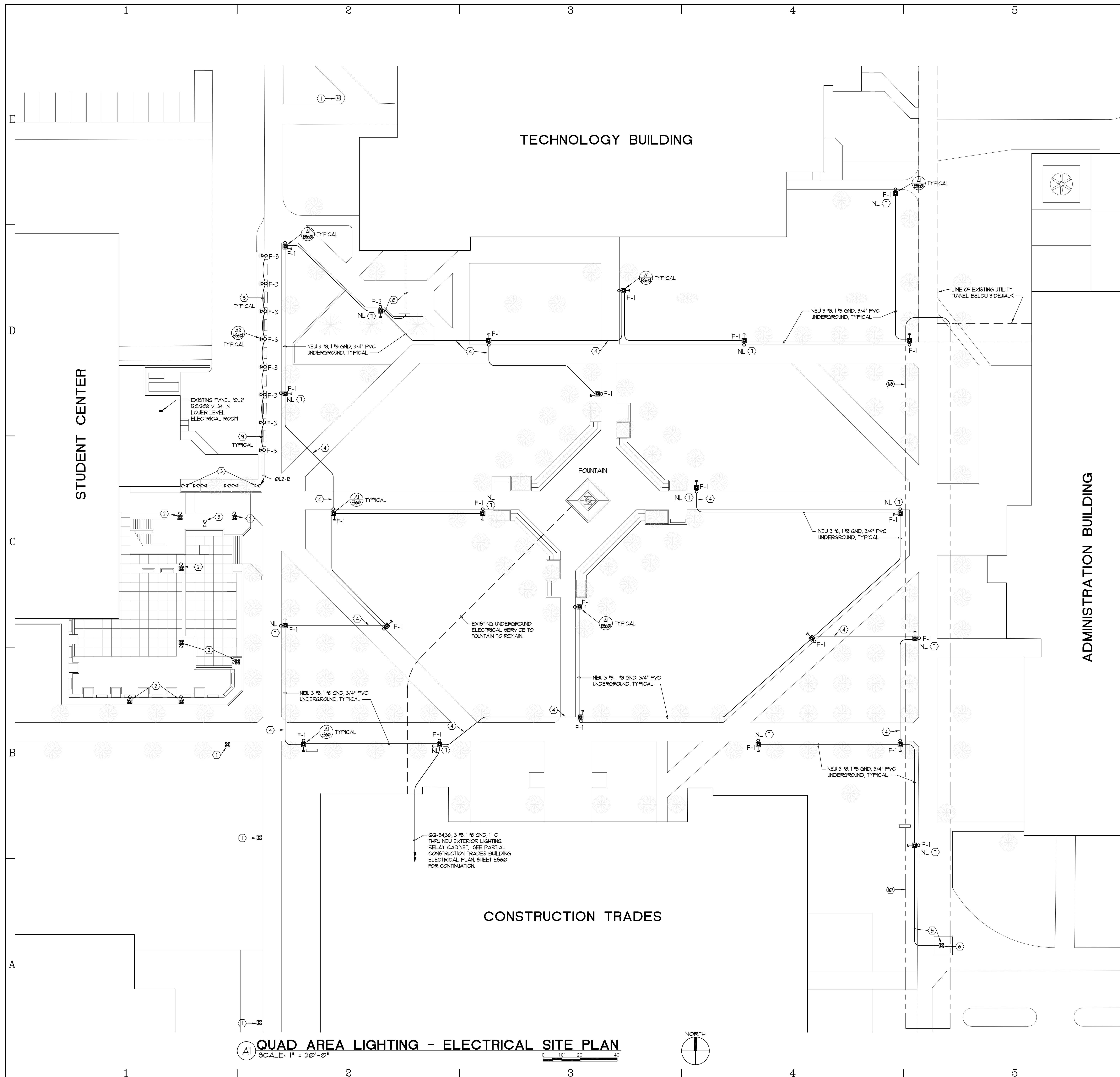
SHEET TITLE:

QUAD AREA LIGHTING -
SITE DEMOLITION PLAN

SHEET NUMBER:

ED101

SHEET 2 OF 12



GENERAL ELECTRICAL NOTES:

1. LOCATIONS OF ALL EXISTING ELECTRICAL EQUIPMENT, LIGHTING, SWITCHES, OUTLETS, BRANCH CIRCUIT WIRING, ETC., ARE BASED ON EXISTING BUILDING ELECTRICAL DRAWINGS AND FIELD OBSERVATION OF EXISTING SURFACE CONDITIONS. FIELD VERIFY EXISTING LOCATIONS AND CIRCUITING AND IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES WHICH MAY ADVERSELY AFFECT COMPLETION OF THE WORK.
2. BURY ALL UNDERGROUND CONDUITS MINIMUM 24" BELOW FINISH GRADE WITH RED MAGNETIC WARNING TAPE STATING "CAUTION - BURIED ELECTRICAL" 12 INCHES ABOVE THE CONDUIT.
3. USE GALVANIZED RIGID STEEL CONDUIT (GRC) FOR ALL CONDUIT THROUGH GRADE AND ELBOUS IN PVC CONDUIT RUNS. CORROSION PROTECT GRC CONDUIT IN ACCORDANCE WITH SPECIFICATION SECTION 1610.
4. INSTALL NEW UNDERGROUND CONDUIT BEYOND DRIP EDGE OF EXISTING TREES WHERE POSSIBLE TO AVOID DAMAGE TO THE TREE ROOTS. HAND EXCAVATION WILL BE REQUIRED WHERE MAJOR TREE ROOT SYSTEM ARE ENCOUNTERED.
5. TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDINGS AND FACILITIES. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER.
6. REPLACE GRASS SOD DISTURBED BY EXCAVATION WITH NEW GRASS SOD IN ACCORDANCE WITH SPECIFICATION SECTION 0210.
7. TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING UNDERGROUND UTILITIES. IMMEDIATELY REPAIR ANY DAMAGE TO EXISTING UNDERGROUND IRRIGATION SPRINKLER SYSTEM, SPRINKLER CONTROL WIRING, WATER LINES, AND OTHER UNDERGROUND UTILITIES.
8. OBTAIN CURRENT UTILITY PLAN FROM SALT LAKE COMMUNITY COLLEGE PRIOR TO PERFORMING ANY EXCAVATION.

KEYED NOTES:
FOR SHEET ES101 ONLY

- (2) EXISTING 150 WATT HIGH PRESSURE SODIUM LIGHT POLE AND FIXTURE TO REMAIN SEE SHEET EDJ01 FOR APPROXIMATE LOCATION OF EXISTING UNDERGROUND CIRCUITING.
- (2) EXISTING LIGHT POLES AND FIXTURES TO REMAIN. SHOWN FOR REFERENCE ONLY.
- (3) EXISTING GROUND MOUNTED FLOODLIGHTS TO REMAIN. SHOWN FOR REFERENCE ONLY.
- (4) HORIZONTAL BORE, OR PUSH RIGID STEEL CONDUIT, UNDER EXISTING SIDEWALKS. CONTRACTOR MAY SAWCUT SIDEWALK AT TOOL JOINT AND PROVIDE NEW 6" THICK SIDEWALK AT CONTRACTOR'S OPTION.
- (5) EXISTING LIGHT POLE AND FIXTURE TO BE REMOVED AND REINSTALLED UNDER CONCURRENT TUNNEL EXTENSION PROJECT. RECONNECT FIXTURE NEW CIRCUIT AS SHOWN. PROVIDE RIGID STEEL CONDUIT THROUGH TUNNEL WITH CONDUIT SEALING BUSHING AT TUNNEL PENETRATION. COORDINATE INSTALLATION OF CONDUIT IN TUNNEL WITH UTILITY TUNNEL CONTRACTOR.
- (6) REPLACE EXISTING 400 VOLT FIXTURE BALLAST WITH NEW 120/208/240/277 VOLT MULTI-TAP HIGH POWER FACTOR, 150 WATT HIGH PRESSURE SODIUM BALLAST.
- (7) CONNECT FIXTURES DESIGNATED AS NIGHT LIGHT BY "NL" TO CIRCUIT QQ-34. CONNECT ALL OTHER FIXTURES TO CIRCUIT QQ-36. EXTEND BOTH CIRCUIT WIRES TO ALL NEW FIXTURES.
- (8) EXTEND EXISTING UNDERGROUND CONDUIT FROM TECHNOLOGY BUILDING TO NEW LIGHT POLE. PROVIDE NEW WIRING AS REQUIRED TO CONNECT EXISTING 120 VOLT CIRCUIT TO NEW RECEPTACLE ON NEW LIGHT POLE.
- (9) EXTEND EXISTING UNDERGROUND CONDUIT TO NEW FLOODLIGHTS AND PROVIDE NEW WIRING AS REQUIRED TO RECONNECT EXISTING CIRCUIT.

AREA OF UTILITY TUNNEL EXTENSION FROM ADMINISTRATION BUILDING TO CONSTRUCTION TRADES BUILDING TO BE CONSTRUCTED UNDER A CONCURRENT CONSTRUCTION CONTRACT. CONTRACTOR TO COORDINATE CONSTRUCTION SCHEDULE WITH UTILITY TUNNEL PROJECT TO PERFORM WORK IN THIS AREA TO AVOID CONFLICTS WITH UTILITY TUNNEL PROJECT.

CONSTRUCTION SEQUENCE:

1. INSTALL NEW QUAD AREA LIGHT POLES AND FIXTURES AND VERIFY PROPER OPERATION PRIOR TO REMOVAL OF EXISTING LIGHT POLES AND FIXTURES.



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QUAD AREA LIGHTING AND LIGHTING CONTROLS UPGRADE

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[illegible]

ISSUE TYPE: CONSTRUCTION DOCUMENTS

ISSUE DATE: FEB. 26, 2007

DPCM PROJECT NO.: 06/06660

STATE PROPERTY NO.: VARIOUS

CAD DWG FILE: ESI01.dwg

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SHEET TITLE:

QUAD AREA LIGHTING -
ELECTRICAL SITE PLAN

SHEET NUMBER:

ES101

SHEET 3 OF 12

FIXTURE SCHEDULE				
SYMBOL	MANUFACTURER	CATALOG NO.	DESCRIPTION	LAMP
F-1	ARCH AREA LTG LUMEC	SL PLB24CGR5 175MH SLA-16 DB6-4R12-226 MTB BBS4-18 CAND1-CN1-1A-175MH-SE5-277-BKT/ AMGU-12-BABS18-9F/1456"	POLE MOUNTED METAL HALIDE FIXTURE WITH CAST ALUMINUM HOUSING, DECORATIVE ALUMINUM MOUNTING ARM, CLEAR POLYCARBONATE LENS, TYPE V TEMPERED GLASS REFRACTOR, BLACK TEXTURED POWDER COAT FINISH, AND 277 VOLT HIGH POWER FACTOR BALLAST, MOUNTED ON 12 FT DECORATIVE ALUMINUM POLE WITH CAST ALUMINUM ANCHOR BOLT COVER, BREAKAWAY BANNER ARM, AND DARK BRONZE POWDER COAT FINISH TO MATCH FIXTURE.	175 W MH
F-2	ARCH AREA LTG LUMEC	SL PLB24CGR5 175MH SLA-16 DB6-4R12-226 MTB BBS4-18 DB4-56" CAND1-CN1-1A-175MH-SE5-277-BKT/ AMGU-12-BABS18-9F/1456"	SAME AS F-1 EXCEPT WITH DUPLEX GFCI RECEPTACLE (NEMA 5-20R) AND RAINLIGHT WHITE IN USE COVER MOUNTED ON POLE MAXIMUM 56" ABOVE BASEPLATE.	175 W MH
F-3	GARDCO STERNER	DF7-ST-HFL-70MH-120-BRP-CH-POLY PL6-70MH-HPV-120-C-SV-ST-TS-5G-N-82	METAL HALIDE FLOODLIGHT WITH CAST ALUMINUM HOUSING, SPECULAR ALUMINUM REFLECTOR, HORIZONTAL FLOOD LIGHT DISTRIBUTION, CLEAR TEMPERED GLASS LENS, HEAVY DUTY KNUCKLE WITH INTEGRAL SPLICE COMPARTMENT, GLARE SHIELD, POLYCARBONATE VANDAL SHIELD, DARK BRONZE POWDER COAT FINISH, AND 120 VOLT HIGH POWER FACTOR BALLAST MOUNTED ON 18" STANCHION FOR DIRECT BURIAL IN CONCRETE.	70 W MH ED-17

EXTERIOR LIGHTING CONTROL EQUIPMENT:

CBI CONTROL CIRCUIT BREAKER, 120 VOLT, 5 AMP THERMAL MAGNETIC TRIP, RAIL MOUNTED, SQUARE D CLASS 9080, TYPE GCB50, INSTALL IN CABINET.

ATC-1 BUILDING AUTOMATION SYSTEM RELAY BY CONTROLS CONTRACTOR, SEE SPECIFICATION SECTION 16100. LOCATED IN EXISTING LOCAL ATC PANEL IN MECHANICAL ROOM 060.

FCI PHOTOCELL, 2000 WATT, 120 VOLT, WITH 9PST CONTACTS, TORK #101 OR EQUAL. INSTALL OUTSIDE FACING NORTH AND AWAY FROM LIGHT SOURCES.

CRI INDUSTRIAL CONTROL RELAY WITH 2 N.O. CONTACTS AND 120 VAC COIL, SQUARE D CLASS 8501, TYPE X020V02 OR EQUAL. INSTALL IN CABINET.

S61 SELECTOR SWITCH, 3 POSITION, MAINTAINED CONTACT, 3 NO, 4 3 NC CONTACTS, SQUARE D CLASS 9001, TYPE K543BH3 WITH 300I-AN360 "HAND-OFF-AUTO" ALUMINUM LEGEND PLATE. INSTALL IN COVER OF CABINET.

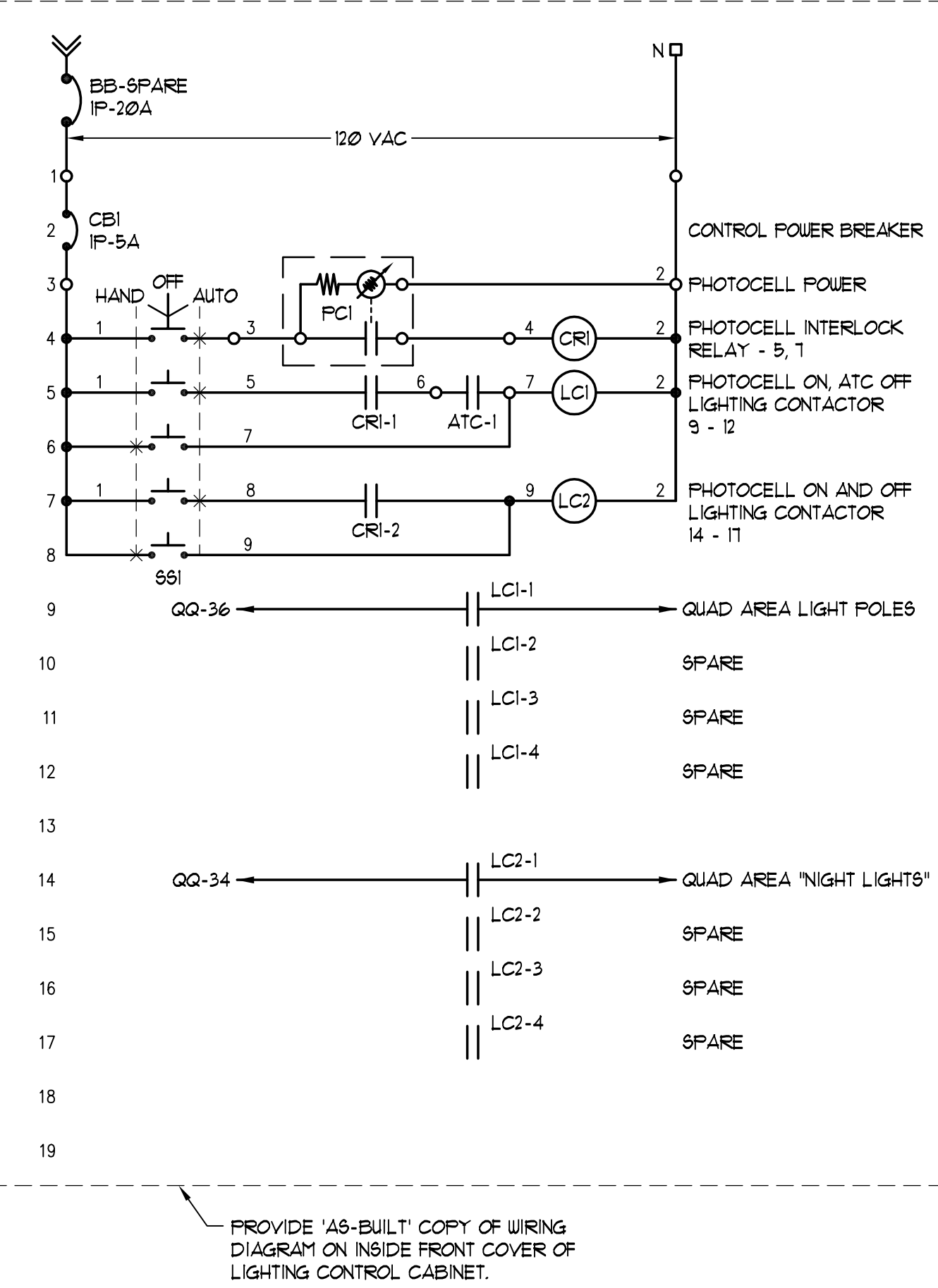
LC1 LIGHTING CONTACTOR, ELECTRICALLY HELD, 4 POLE, 20 AMP, LC2 120 VAC COIL, SQUARE D CLASS 8903, TYPE L040-V02 OR EQUAL. INSTALL IN CABINET.

LIGHTING CONTROL CABINET, 16" W x 20" H x 6" D, NEMA 1 ENCLOSURE WITH HINGED FRONT COVER, FLUSH LATCH AND EQUIPMENT MOUNTING PANEL, WEGMAN NIC-16206 OR EQUAL.

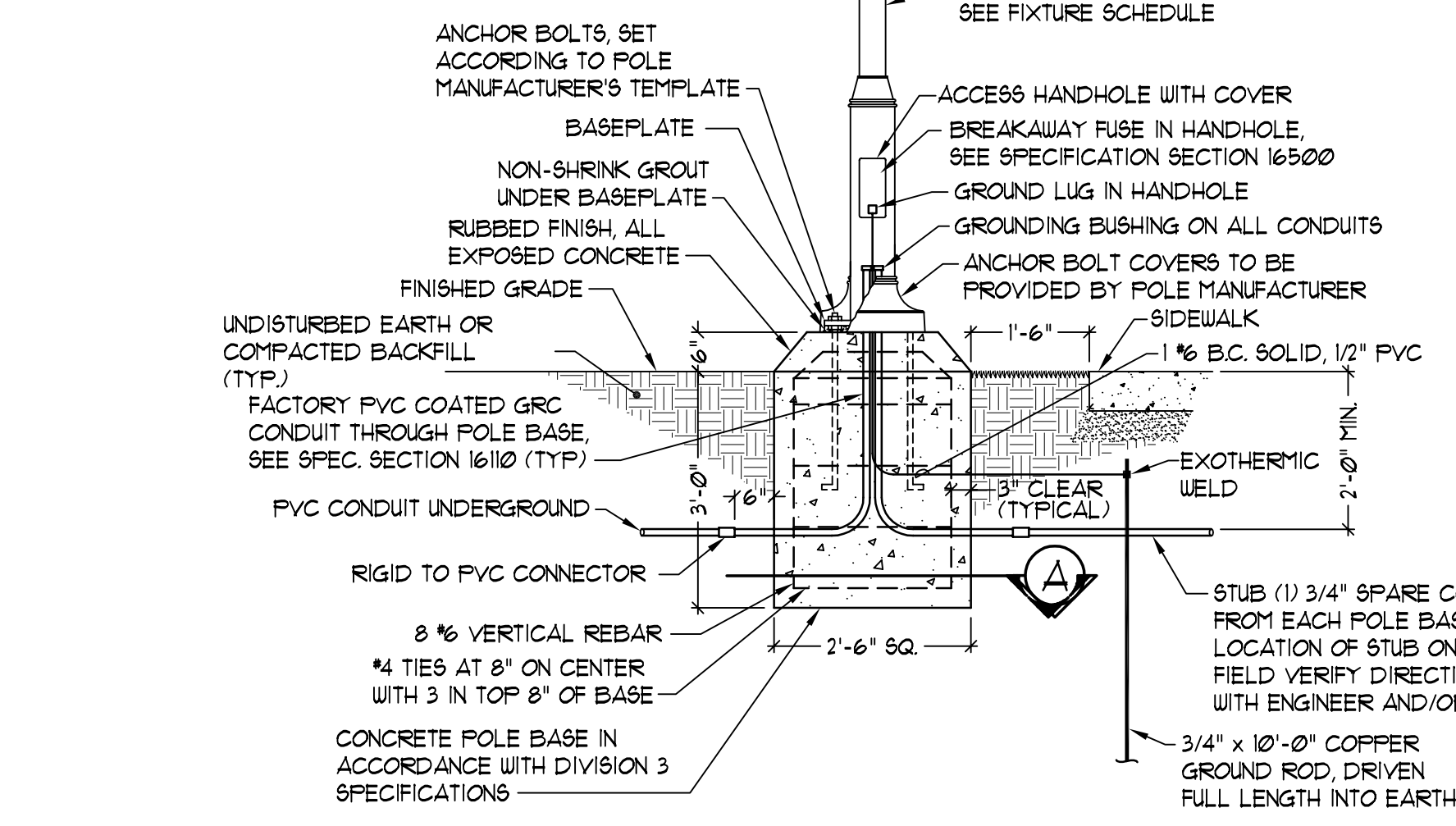
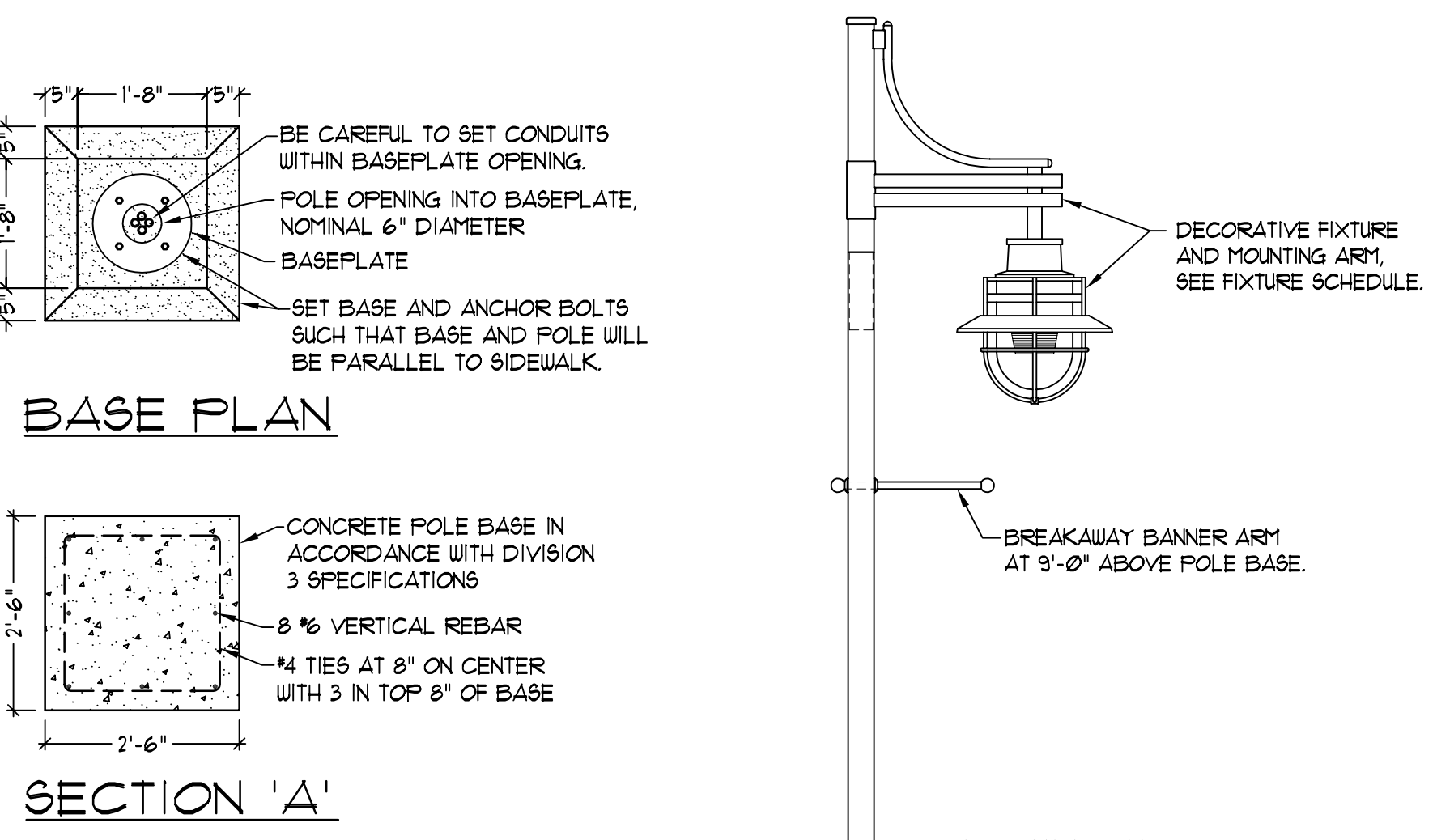
TERMINAL BLOCKS, 600 VOLT, FOR #2-#6 CONDUCTORS, PROVIDE WITH MOUNTING RAIL, END BARRIERS, ETC. AS REQUIRED, SQUARE D CLASS 9080, TYPE GR6 OR EQUAL. INSTALL IN CABINET AS REQUIRED FOR TERMINATION OF ALL CONDUCTORS TO OUTSIDE OF CABINET.

CONTROL NOTES:

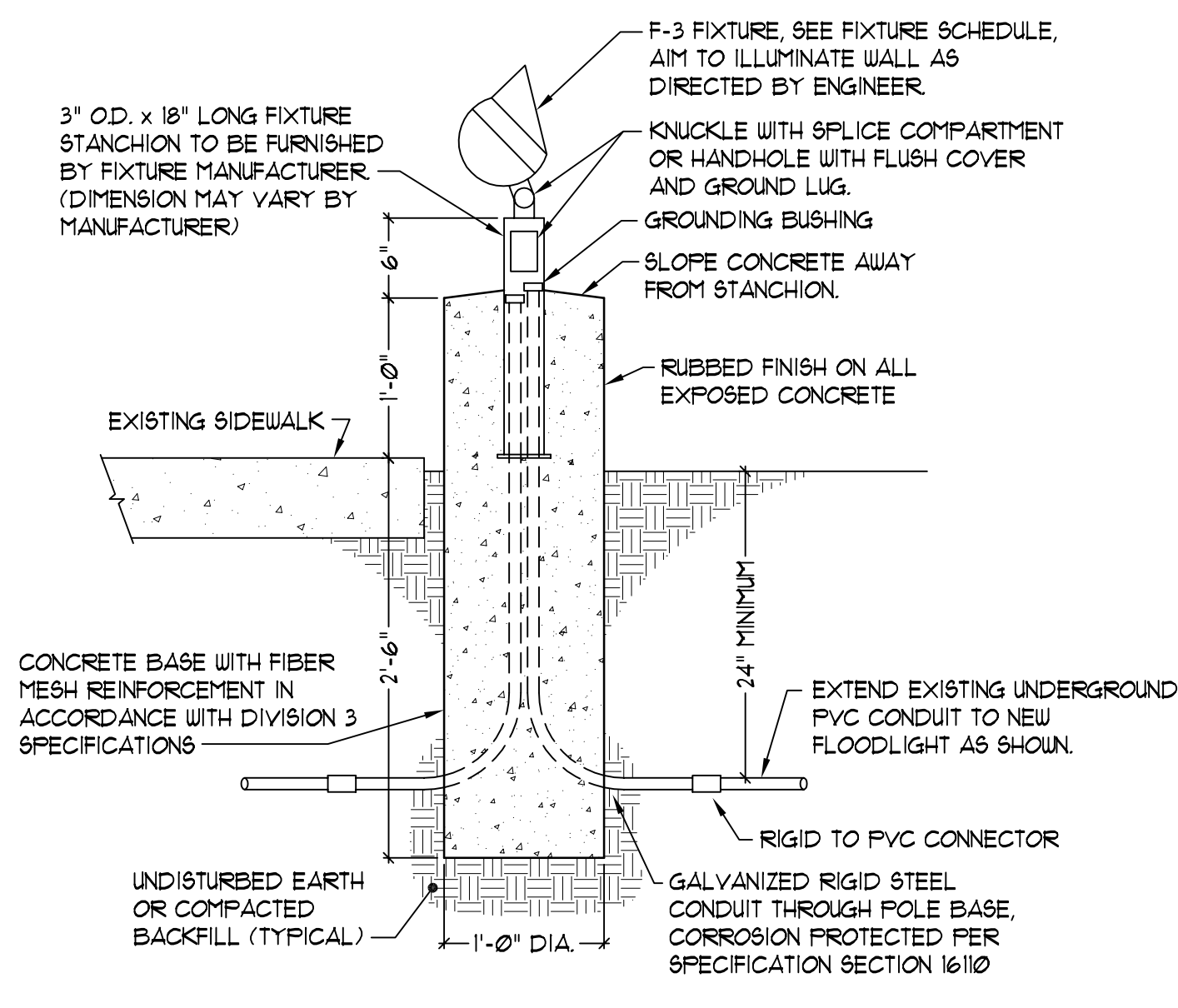
- USE MINIMUM #4 STRANDED WIRE FOR ALL CONTROL CONDUCTORS. LABEL WIRE ACCORDING TO NUMBER ON CONTROL DIAGRAM. SEE SPECIFICATION SECTION 16105.
- REFER TO ELECTRICAL PLANS FOR POWER WIRE SIZES.
- PROVIDE ENGRAVED NAMEPLATE FOR "QUAD AREA LIGHTING CONTROL CABINET" IN ACCORDANCE WITH SPECIFICATION SECTION 16105. PROVIDE SELF-ADHESIVE LABEL TO INCLUDE CIRCUIT NUMBERS OF ALL CONTROL AND POWER CIRCUITS.
- PROVIDE SELF-ADHESIVE LABELS TO IDENTIFY ALL CONTROL DEVICES ACCORDING TO WIRING DIAGRAM.
- PROVIDE DEVICES AS SPECIFIED OR EQUAL OF CUTLER HAMMER, GENERAL ELECTRIC OR SIEMENS.



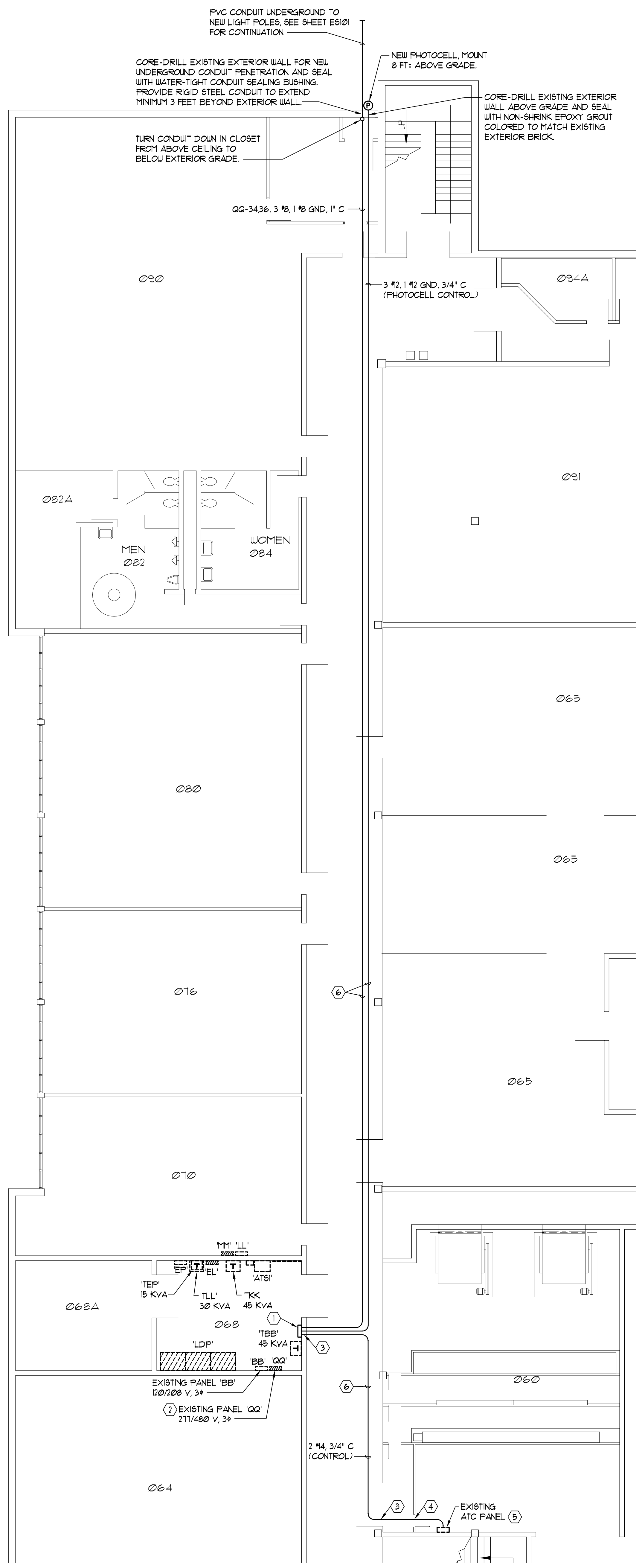
C2 EXTERIOR LIGHTING CONTROL WIRING DIAGRAM SCHEMATIC



A1 TYPICAL LIGHT POLE BASE DETAIL SCALE: 1/2" = 1'-0"



A3 TYPICAL FLOODLIGHT DETAIL SCALE: 1" = 1'-0"



A4 PARTIAL CONSTRUCTION TRADES LOWER LEVEL ELECTRICAL PLAN SCALE: 1/8" = 1'-0"

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- TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDINGS AND FACILITIES. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER.

KEYED NOTES:

- FOR SHEET ES601 ONLY
- NEW QUAD AREA EXTERIOR LIGHTING CONTROL PANEL, SEE CONTROL WIRING DIAGRAM THIS SHEET.
 - PROVIDE TWO GENERAL ELECTRIC TYPE 'THED' 1P-20A BRANCH CIRCUIT BREAKERS IN EXISTING PANEL 'QQ', G.E. TYPE 'NHE' PANELBOARD, TO SERVE NEW QUAD AREA LIGHTING CIRCUITS.
 - DRILL AND FIRE SEAL EXISTING CONCRETE BLOCK WALL FOR CONDUIT PENETRATIONS.
 - SEAL CONDUIT PENETRATION THROUGH PLENUM WALL AIR-TIGHT WITH SILICON CAULK.
 - PROVIDE NEW RELAY IN EXISTING ATC PANEL FOR CONTROL OF NEW QUAD AREA LIGHTING. SEE CONTROL WIRING DIAGRAM, THIS SHEET, AND SPECIFICATION SECTION 16100.
 - INSTALL NEW CONDUIT ABOVE EXISTING GRID CEILING IN HALLWAY AND ROOMS.

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QUAD AREA LIGHTING
AND
LIGHTING CONTROLS
UPGRADE

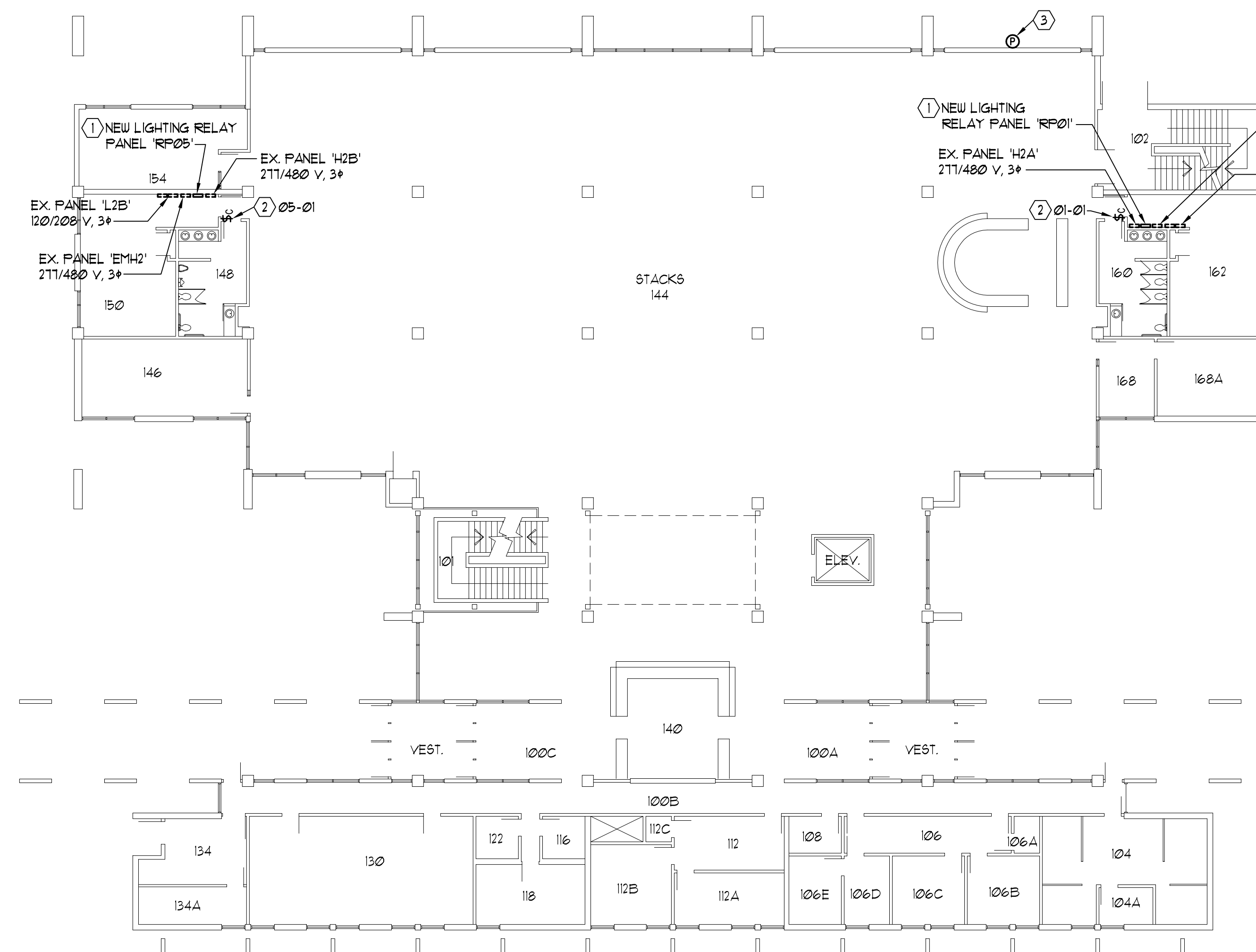
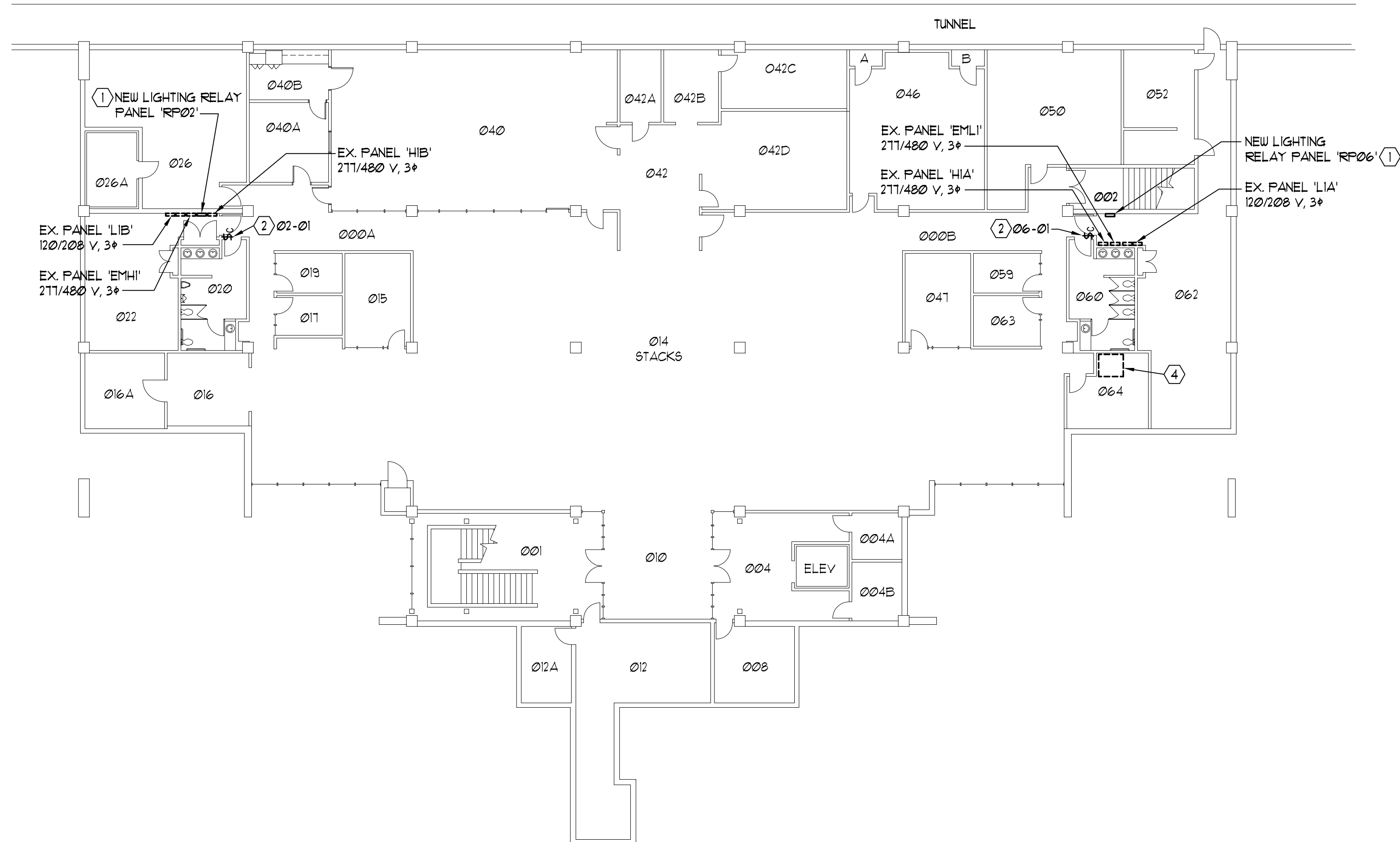
REVISIONS:
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ISSUE TYPE: CONSTRUCTION DOCUMENTS
ISSUE DATE: FEB. 26, 2007
DFCM PROJECT NO.: 06106660
STATE PROPERTY NO.: VARIOUS
CAD DWG FILE: ES601.dwg
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SHEET TITLE:
**QUAD AREA LIGHTING -
SCHEDULES AND DETAILS**

SHEET NUMBER:
ES601

SHEET 4 OF 12



LIGHTING RELAY PANEL 'RP02'						BUILDING: LIBRARY		LOCATION: ELECTRICAL ROOM 022			
						CONTROL CIRCUIT: H1B-10, 277 VOLT					
RELAY NO.	PANEL	CKT #	VOLT	DESCRIPTION	CONTROL GROUP	RELAY NO.	PANEL	CKT #	VOLT	DESCRIPTION	CONTROL GROUP
1	H1B	1	277	STACKS 14 NW C'DVE & HALL	C	2	H1B	7	277	EAST & SOUTH WALKWAY LIGHTING	G
3	H1B	3	277	STACKS 14 WEST C'DVE	C	4	H1B	9	277	EAST & SOUTH WALKWAY LIGHTING	H
5	H1B	5	277	STACKS 14 SW C'DVE	C	6				SPARE	
7	H1B	2	277	ROOMS 016, 020, 022, 026	D	8				SPARE	
9	H1B	4	277	ROOMS 040 WEST, 040A	A	10				SPARE	
11	H1B	6	277	ROOM 040 EAST	A	12				SPARE	
13				SPACE		14				SPACE	
15						16					
17						18					
19						20					
21						22					
23				SPACE		24				SPACE	

LIGHTING RELAY PANEL 'RPO1'					BUILDING: LIBRARY				
					LOCATION: ELECTRICAL ROOM 162				
					CONTROL CIRCUIT: H2A-7, 277 VOLT				
RELAY NO.	BRANCH CIRCUIT			CONTROL GROUP	RELAY NO.	BRANCH CIRCUIT			CONTROL GROUP
	PANEL	CKT #	VOLT DESCRIPTION			PANEL	CKT #	VOLT DESCRIPTION	
1	H2A	1	277 HALL 100B, OFFICES 104, 106	A	2	H2A	4	277 STACKS 144 B16 COWE NORTH	C
3	H2A	3	277 RMS 112, 112A, 112B, 118	A	4	H2A	4	277 STACKS 144 B16 COWE SOUTH	C
5	H2A	5	277 RMS 130, 134, 134A	A	6	H2A	6	277 STACKS 144 UNDER COWE SOUTH	C
7	H2A	7	277 STACKS 144 EAST	C	8	H2A	8	277 STACKS 144 COWE BOX EAST	C
9	H2A	9	277 STACKS 144 WEST	C	10	H2A	10	277 STACKS 144 COWE BOX WEST	C
11	H2A	11	277 EAST OUTSIDE WALKWAY ENTRANCE	H	12	H2A	12	277 RMS 160, 162, 168, 168A	D
13	L2A	38	120 ROOM 112B, INCANDESCENT LIGHTS	A	14	H2A	14	277 BUMSIDE SOFFIT LIGHTS, N & S	H
15			SPARE		16			SPARE	
17			SPARE		18			SPARE	
19			SPARE		20			SPARE	
21			SPARE		22			SPARE	
23			SPARE		24			SPARE	

LIGHTING RELAY PANEL 'RP06'						BUILDING LOCATION: CONTROL CIRCUIT: HIA-12, 277 VOLT		LIBRARY ELECTRICAL ROOM 062 CONTROL CIRCUIT: HIA-12, 277 VOLT		
RELAY NO.	BRANCH CIRCUIT				CONTROL GROUP	RELAY NO.	BRANCH CIRCUIT			CONTROL GROUP
	PANEL	CKT #	VOLT	DESCRIPTION			PANEL	CKT #	VOLT	
1	H1A	1	277	STACKS 14 NE LIGHTS	C	2	L1A	27	120	A
2	H1A	3	277	STACKS 14 SE LIGHTS	C	4	H1A	7	277	G
5	H1A	5	277	RMS 004,008,010,012 (EAST LTO)	B	6	H1A	9	277	H
7	H1A	2	277	RMS 047,059,060,063, EAST HALL	D	8				
9	H1A	4	277	STACKS 14 EAST LIGHTS	C	10				
11	H1A	6	277	ROOM 046,050	A	12				
13	H1A	8	277	ROOM 042,042B-042D	A	14				
15	H1A	10	277	FUTURE ARDWORK LIGHTS	C	16				
17				SPARE	19					
21				SPACE	20					
22				SPACE	22					
23				SPACE	24					

LIGHTING RELAY PANEL 'RP05'					BUILDING: LIBRARY				
					LOCATION: ELECTRICAL ROOM 150				
					CONTROL CIRCUIT: H2B-9, 277 VOLT				
RELAY NO.	BRANCH CIRCUIT			CONTROL GROUP	RELAY NO.	BRANCH CIRCUIT			CONTROL GROUP
	PANEL	CKT #	VOLT DESCRIPTION			PANEL	CKT #	VOLT DESCRIPTION	
1	H2B	1	277 STACKS 144 S.E. COVE	C	2	H2B	2	277 STACKS 144 BIG COVE	C
3	H2B	3	277 STACKS 144 S.W. COVE	C	4	H2B	4	277 STACKS 144 BIG COVE	C
5	H2B	5	277 STACKS 144 BODK AREA WEST	C	6	H2B	6	277 RMS 146, 148, 150, 154	D
7	H2B	7	277 STACKS 144 BODK AREA EAST	C	8	H2B	8	277 WEST OUTSIDE WALKWAY ENTRANCE	H
9			SPARE		10	H2B	10	277 WEST OUTSIDE SOFFIT LIGHTS	H
11			SPARE		12			SPARE	
13			SPACE		14			SPACE	
15					16				
17					18				
19					20				
21					22				
23			SPACE		24			SPACE	

- ## KEYED NOTES:
- FOR SHEET E101 ONLY
- 1) REPLACE EXISTING LIGHTING RELAY PANEL WITH NEW LIGHTING RELAY PANEL AS INDICATED AND RECONNECT ALL EXISTING BRANCH CIRCUITS.
 - 2) REPLACE EXISTING LIGHTING CONTROL SYSTEM SWITCH AND CONTROL WIRING WITH NEW SWITCH AND CONTROL WIRING.
 - 3) REPLACE EXISTING EXTERIOR PHOTOCELL AND CONTROL WIRING WITH NEW PHOTOCELL, CONTROLLER, AND WIRING. FIELD VERIFY EXISTING PHOTOCELL LOCATION.
 - 4) REMOVE EXISTING LIGHTING CONTROL SYSTEM NETWORK COMPUTER INCLUDING ALL EXISTING COMMUNICATION OUTLETS AND CABLE CONNECTIONS TO EXISTING LIGHTING RELAY PANELS, INCLUDING PANELS IN LIFETIME ACTIVITY CENTER AND SCIENCE/INDUSTRY BUILDINGS.

- ## GENERAL ELECTRICAL NOTES:
1. LOCATIONS OF ALL EXISTING ELECTRICAL EQUIPMENT, LIGHTING, SWITCHES, OUTLETS, BRANCH CIRCUIT WIRING, ETC., ARE BASED ON EXISTING BUILDING ELECTRICAL DRAWINGS AND FIELD OBSERVATION OF EXISTING SURFACE CONDITIONS. FIELD VERIFY EXISTING LOCATIONS AND CIRCUITING AND IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES WHICH MAY ADVERSELY AFFECT COMPLETION OF THE WORK.
 2. DEMOLITION IS SHOWN FOR CONTRACTOR'S REFERENCE ONLY. FIELD VERIFY QUANTITIES AND LOCATIONS OF ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED. REMOVE ALL ABANDONED CONDUIT WIRING, BOXES, OUTLETS, ETC. ASSOCIATED WITH EXISTING EQUIPMENT INDICATED TO BE REMOVED OR REPLACED.
 3. ALL MATERIALS AND EQUIPMENT REMOVED SHALL BE DISPOSED OF BY THE CONTRACTOR EXCEPT FOR ITEMS SPECIFICALLY NOTED TO BE SALVAGED FOR OWNER.
 4. TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDINGS AND FACILITIES. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER.

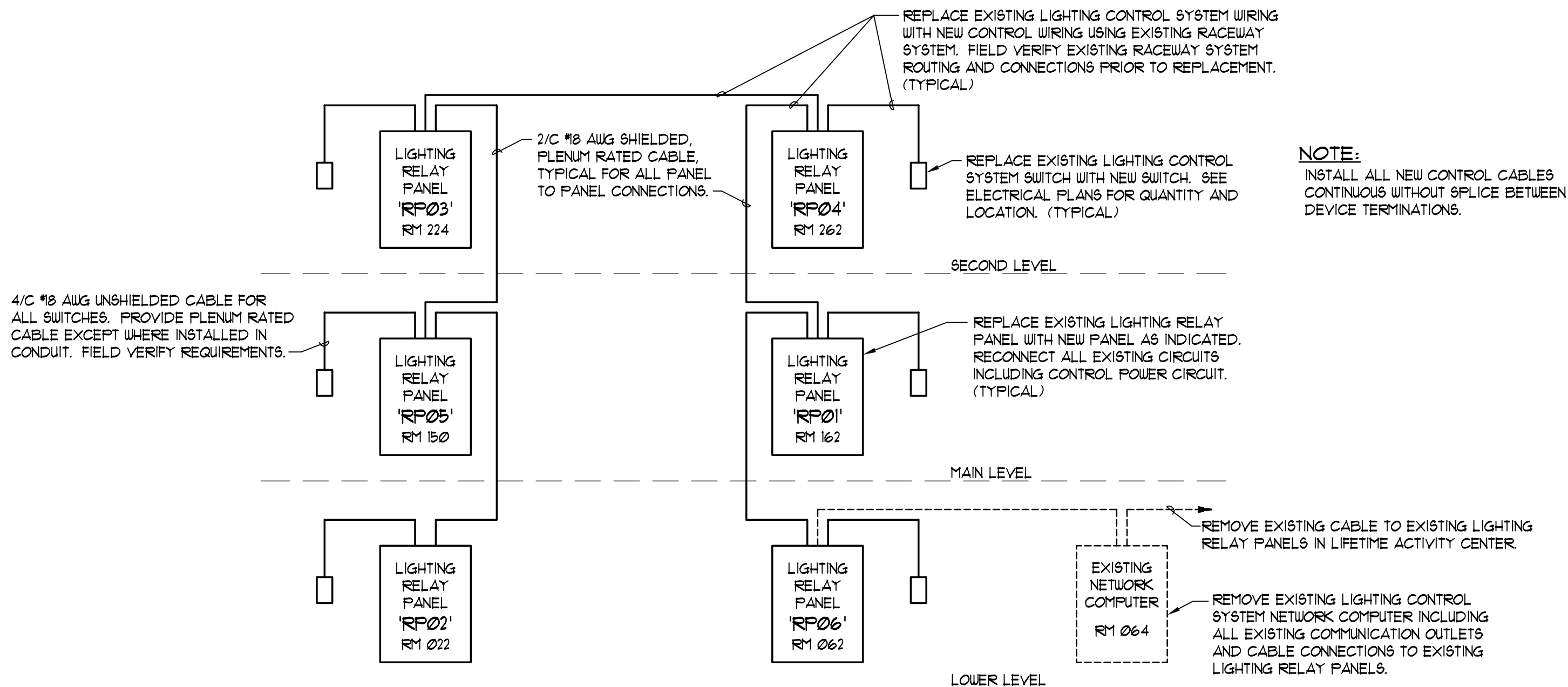
LIGHTING RELAY PANEL 'RP03'						BUILDING: LIBRARY LOCATION: ELECTRICAL ROOM 224 CONTROL CIRCUIT: H3B-7, 277 VOLT					
RELAY NO.	PANEL	CKT #	VOLT	BRANCH CIRCUIT DESCRIPTION	CONTROL GROUP	RELAY NO.	PANEL	CKT #	VOLT	BRANCH CIRCUIT DESCRIPTION	CONTROL GROUP
1	H3B	1	277	STACKS 206 BIG COVE	C	2	H3B	2	277	STACKS 206 UNDER COVE SOUTH	C
3	H3B	3	277	STACKS 206 BIG COVE	C	4	H3B	4	277	STACKS 206 COVE BOX SOUTH	C
5	H3B	5	277	STACKS 206 COVE, RMS 218,220,224	D	6	H3B	6	277	STACKS 206 WEST STUDY AREA	C
7				SPARE		8	H3B	8	277	STACKS 206 BOOK AREA NORTHWEST	C
9				SPARE		10	H3B	10	277	STACKS 206 BOOK & STUDY N.E.	C
11				SPARE		12					
13				SPARE		14					
15						16					
17						18					
19						20					
21						22					
23				SPACE		24				SPACE	

LIGHTING RELAY PANEL 'RP04'						BUILDING: LIBRARY LOCATION: ELECTRICAL ROOM 262 CONTROL CIRCUIT: H3A-17, 277 VOLT					
RELAY NO.	BRANCH CIRCUIT				CONTROL GROUP	RELAY NO.	BRANCH CIRCUIT				CONTROL GROUP
	PANEL	CKT #	VOLT	DESCRIPTION			PANEL	CKT #	VOLT	DESCRIPTION	
1	H3A	1	277	RMS 260, 262	D	2	H3A	2	277	STACKS 206 BIG COVE	C
3	H3A	3	277	RMS 230, 240, EAST STAIR 202	D	4	H3A	4	277	STACKS 206 BIG COVE	C
5	H3A	5	277	STACKS 206 EAST COVE	C	6	H3A	6	277	STACKS 206 COVE BOX	C
7	H3A	7	277	STACKS 206 EAST BOOK AREA	C	8	H3A	8	277	STACKS 206 COVE BOX	C
9	H3A	9	277	STACKS 206 WEST BOOK AREA	C	10	H3A	10	277	OVER ELEVATOR	B
11	H3A	11	277	RW 140 OVER FRONT ENTRANCE	B	12	H3A	12	277	STACKS 206 SKYLIGHTS	C
13	H3A	13	277	STACKS 206 FUTURE ARTWORK	A	14	L3A	36	120	STACKS 206 EAST TRACK LIGHTS	C
15				SPARE		16	L3A	38	120	STACKS 206 WEST TRACK LIGHTS	C
17				SPARE		18			SPARE		
19				SPARE		20			SPARE		
21				SPARE		22			SPARE		
23				SPARE		24			SPARE		

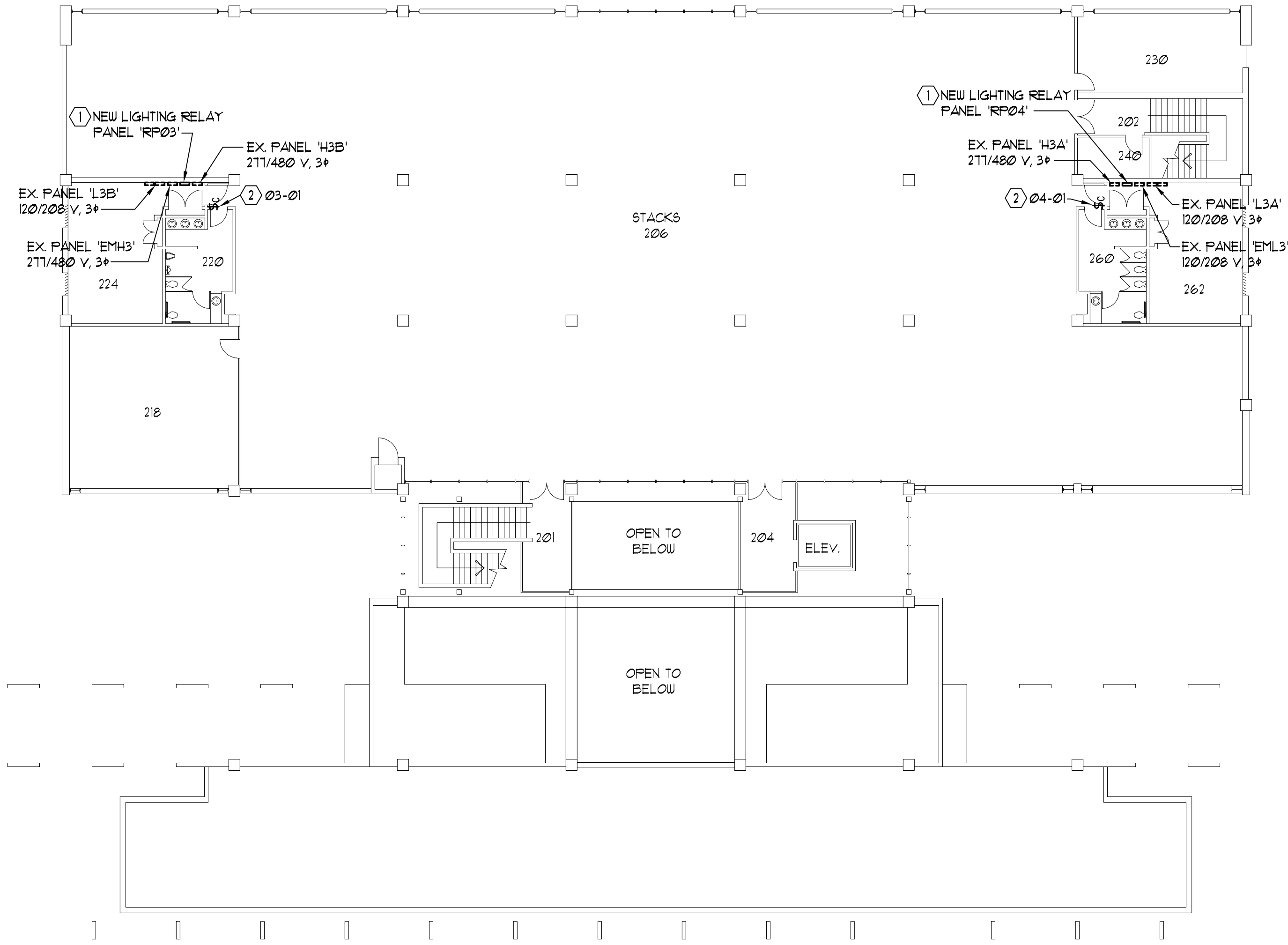
LIBRARY SWITCH SCHEDULE					
RELAY PANEL	SWITCH NO.	BUTTON NO.	CONTROLLED RELAYS	DESCRIPTION	REMARKS
RP01	-01	1	-12	EAST MECHANICAL ROOM	KEY OVERRIDE
		2	SPARE		
RP02	-01	1	-07	WEST MECHANICAL ROOM	KEY OVERRIDE
		2	SPARE		
RP03	-01	1	-05	WEST MECHANICAL ROOM	KEY OVERRIDE
		2	SPARE		
RP04	-01	1	-01	EAST MECHANICAL ROOM	KEY OVERRIDE
		2	-03	JANITOR ROOM & STAIRS	
RP05	-01	1	-06	WEST MECHANICAL ROOM	KEY OVERRIDE
		2	SPARE		
RP06	-01	1	-07	EAST MECHANICAL ROOM	KEY OVERRIDE
		2	SPARE		

LIBRARY CONTROL CHANNEL SCHEDULE							
CHANNEL	GROUP DESCRIPTION	ON CONTROL	OFF CONTROL	BLINK WARN	TIMED OVERRIDE	NOTES	
A	OFFICES	CLOCK	CLOCK	NO	N/A	1, 2	
B	CORRIDORS/COMMON AREAS	CLOCK	CLOCK	NO	N/A	1, 2	
C	STACKS/STUDY AREAS	CLOCK	CLOCK	NO	N/A	1, 2	
D	UTILITY ROOMS	CLOCK	CLOCK	YES	120 M	1, 2	
E	RESERVED						
F	RESERVED						
G	EXTERIOR LIGHTING	PHOTOCELL	CLOCK			1	
H	EXTERIOR LIGHTING	PHOTOCELL	PHOTOCELL				

- NOTES:
- COORDINATE SCHEDULE PARAMETERS AND OPERATION HOURS WITH OWNER PRIOR TO PROGRAMMING.
 - LOCAL ON-OFF CONTROL IS PROVIDED BY HARD-WIRED LINE VOLTAGE SWITCHES.



A2 LIBRARY LIGHTING CONTROL SYSTEM RISER DIAGRAM SCHEMATIC



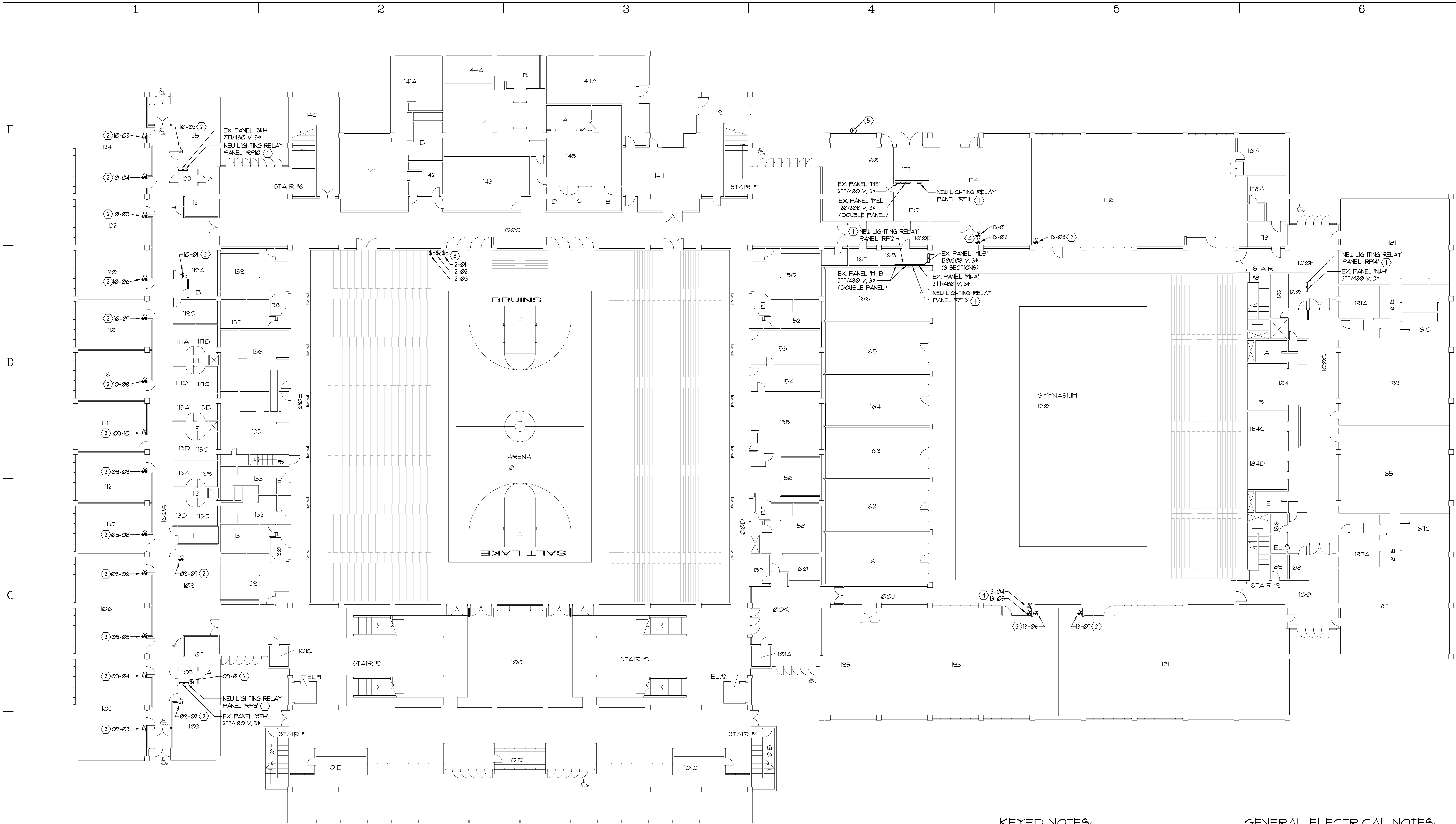
C4 LIBRARY SECOND LEVEL ELECTRICAL PLAN SCALE: 1/16" 1'-0"

KEYED NOTES:
FOR SHEET EL102 ONLY

- REPLACE EXISTING LIGHTING RELAY PANEL WITH NEW LIGHTING RELAY PANEL AS INDICATED AND RECONNECT ALL EXISTING BRANCH CIRCUITS.
- REPLACE EXISTING LIGHTING CONTROL SYSTEM SWITCH AND CONTROL WIRING WITH NEW SWITCH AND CONTROL WIRING.

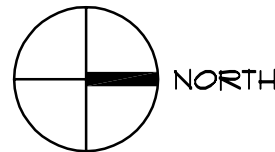
GENERAL ELECTRICAL NOTES:

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- TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDINGS AND FACILITIES. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER.



(B) LIFETIME ACTIVITY CENTER MAIN LEVEL ELECTRICAL PLAN
SCALE: 1/16" = 1'-0"

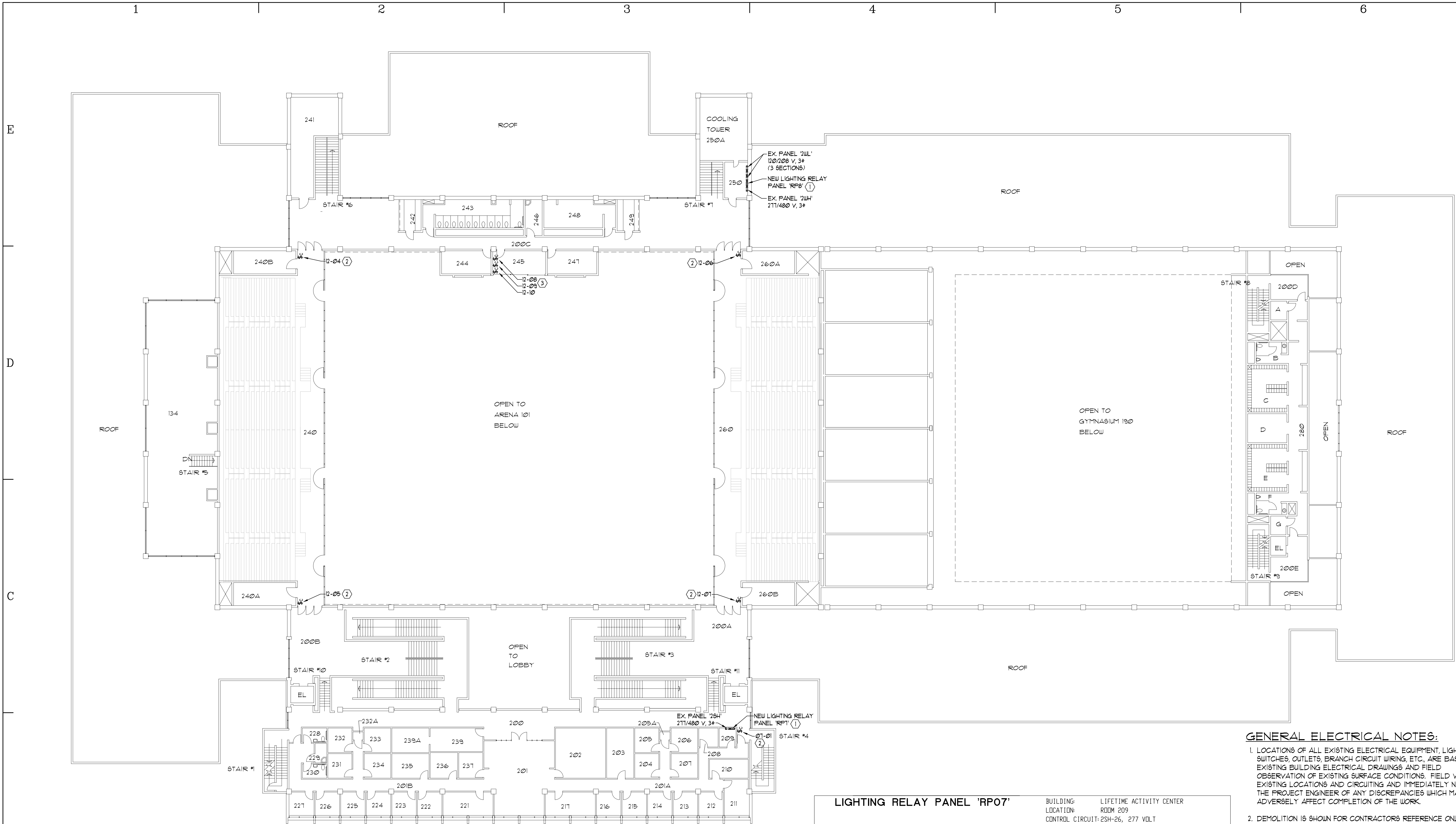
0 8' 16' 32'



LIGHTING RELAY PANEL 'RP10'					BUILDING: LIFETIME ACTIVITY CENTER				
					LOCATION: ROOM 123				
					CONTROL CIRCUIT: SWH-26, 277 VOLT				
RELAY NO.	PANEL	CKT #	VOLT DESCRIPTION	CONTROL GROUP	RELAY NO.	PANEL	CKT #	VOLT DESCRIPTION	CONTROL GROUP
1	SEH	1	277 THERAPY 124	D	2	SWH	2	277 CLASSROOM 120	D
3	SWH	3	277 CLASSROOM 122	D	4	SWH	4	277 CLASSROOM 118	D
5	SWH	5	277 CLASSROOM 125	D	6	SWH	6	277 CLASSROOM 116	D
7	SWH	7	277 CLASSROOM 119A	D	8			SPARE	
9	SWH	9	277 OFFICES 119C, 117, 115A, 115B	A	10	SWH	10	277 STOR 140, MEN 141, JAN 142	B
11	SWH	11	277 LOCKERS 135, 136, 137, 138, 139	B	12	SWH	12	277 TEAM 143, WOMEN 144, TRAINING 145	B
13	SWH	13	277 CORRIDOR 100A & WOMEN 121	B	14	SWH	14	277 ATHLETIC EQUIP. RECEIVING 147	B
15	SWH	15	277 SOUTHWEST OUTSIDE SOFFIT LIGHTS	H	16	SWH	16	277 OUTSIDE SOUTH	G
17	SWH	17	277 CORRIDOR 100C SOUTH	B	18	SWH	18	277 OUTSIDE SOUTH	H
19	SWH	19	277 CORRIDOR 100C NORTH	B	20	SWH	277	ARENA SOUTH CORRIDOR 100B	B
21			SPARE		22			SPARE	
23			SPARE		24			SPARE	
25			SPARE		26			SPARE	
27					28				
29					30				
31					32				
33					34				
35					36				
37					38				
39					40				
41					42				
43					44				
45					46				
47			SPACE		48			SPACE	

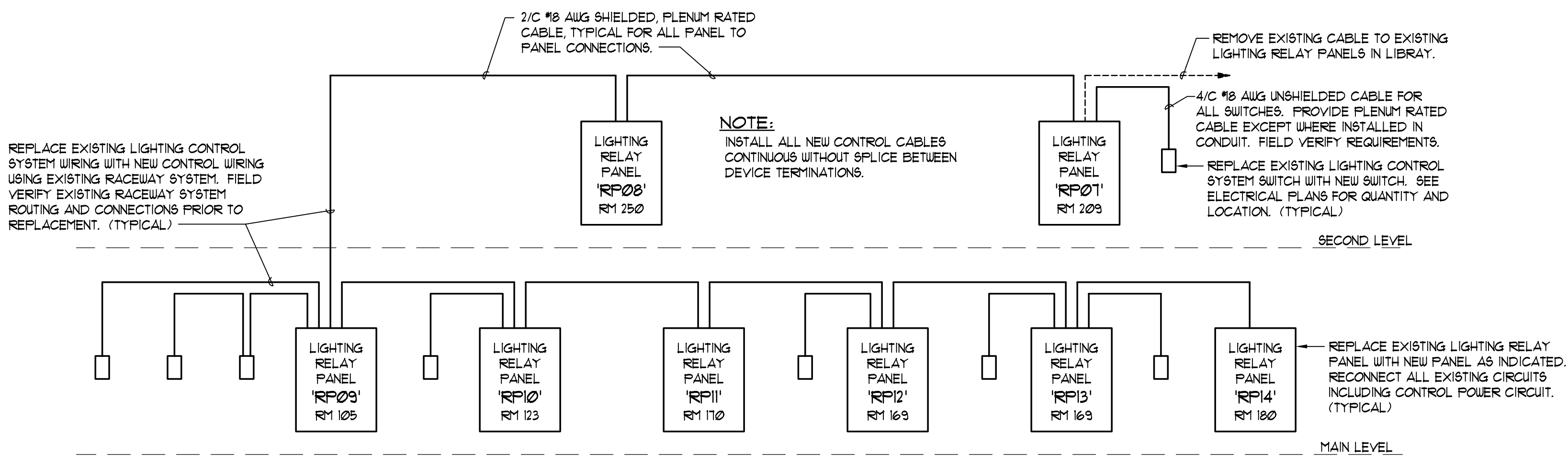
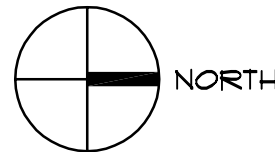
LIGHTING RELAY PANEL 'RP09'					BUILDING: LIFETIME ACTIVITY CENTER				
					LOCATION: ROOM 105				
					CONTROL CIRCUIT: SEH-28, 277 VOLT				
RELAY NO.	PANEL	CKT #	VOLT DESCRIPTION	CONTROL GROUP	RELAY NO.	PANEL	CKT #	VOLT DESCRIPTION	CONTROL GROUP
1	SEH	1	277 CLASSROOM 102	D	2	SEH	2	277 CLASSROOM 103	D
3	SEH	3	277 CLASSROOM 106	D	4	SEH	4	277 CLASSROOM 109	D
5	SEH	5	277 CLASSROOM 110	D	6	SEH	6	277 RESTRM 106, OFFICES 113, 115C-D	A
7	SEH	7	277 LOCKER ROOMS 129, 130, 131, 132, 133	D	8	SEH	8	277 CLASSROOM 114	D
9	SEH	9	277 OUTSIDE SOFFIT LIGHTS	H	10	SEH	10	277 CLASSROOM 112	D
11	SEH	11	277 SOUTH LOBBY 100	B	12	SEH	12	277 EAST OUTSIDE SOFFIT LIGHTS	G
13	SEH	13	277 NORTH LOBBY 100	B	14	SEH	14	277 EAST OUTSIDE SOFFIT LIGHTS	H
15			SPARE		16	SEH	16	277 LOBBY 100 PENDANT LIGHTS	B
17			SPARE		18			277 LOBBY 100 FLOODLIGHTS 1	
19	SEH	19	277 DUAL LEVEL CONTROL	?	20	SEH	20	277 OUTSIDE WALKWAY EAST	G
21			SPARE		22	SEH	22	277 OUTSIDE WALKWAY EAST	H
23			SPARE		24			TICKET BOOTH LIGHTS	A
25			SPARE		26				
27			SPARE		28	SEH	2	277 ELECT. ROOM (FROM EMERG. PNL)	C
29			SPARE		30			SPARE	
31			SPACE		32			SPACE	
33					34				
35					36				
37					38				
39					40				
41					42				
43					44				
45					46				
47			SPACE		48			SPACE	

MARK	DATE	DESCRIPTION



(B) LIFETIME ACTIVITY CENTER SECOND LEVEL ELECTRICAL PLAN
SCALE: 1/16" 1'-0"

0 8' 16' 32'



(A) LIFETIME ACTIVITY CENTER LIGHTING CONTROL SYSTEM RISER DIAGRAM
SCHEMATIC

GENERAL ELECTRICAL NOTES:

- LOCATIONS OF ALL EXISTING ELECTRICAL EQUIPMENT, LIGHTING, SWITCHES, OUTLETS, BRANCH CIRCUIT WIRING, ETC., ARE BASED ON EXISTING BUILDING ELECTRICAL DRAWINGS AND FIELD OBSERVATION OF EXISTING SURFACE CONDITIONS. FIELD VERIFY EXISTING LOCATIONS AND CIRCUITING AND IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES WHICH MAY ADVERSELY AFFECT COMPLETION OF THE WORK.
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- ALL MATERIALS AND EQUIPMENT REMOVED SHALL BE DISPOSED OF BY THE CONTRACTOR EXCEPT FOR ITEMS SPECIFICALLY NOTED TO BE SALVAGED FOR OWNER.
- TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDINGS AND FACILITIES. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER.

KEYED NOTES:
FOR SHEET EL104 ONLY

- REPLACE EXISTING LIGHTING RELAY PANEL WITH NEW LIGHTING RELAY PANEL AS INDICATED AND RECONNECT ALL EXISTING BRANCH CIRCUITS.
- REPLACE EXISTING LIGHTING CONTROL SYSTEM SWITCH AND CONTROL WIRING WITH NEW SWITCH AND CONTROL WIRING.
- REPLACE EXISTING 24 BUTTON CONTROL PANEL WITH 3 NEW 8 BUTTON CONTROL SWITCHES. MODIFY EXISTING ENCLOSURES AS REQUIRED TO INSTALL NEW CONTROL SWITCHES. REPLACE EXISTING MULTIPLE CONTROL WIRING CABLES WITH NEW SINGLE CONTROL WIRE CABLE USING EXISTING RACEWAY SYSTEM.

LIFETIME ACTIVITY CENTER SWITCH SCHEDULE					
RELAY PANEL	SWITCH NO.	BUTTON NO.	CONTROLLED RELAYS	DESCRIPTION	REMARKS
RP07	-01	1	-07,09,11,13	LOBBY HIGH FIXTURES	KEY OVERRIDE
		2	-12,14,16	LOBBY HANGING WOOD FIXTURES	
		3	-08,10	LOBBY SKYLIGHT FIXTURES	
		4	SPARE		
RP08	-01	1			NO SWITCHES
RP09	-01	1	-11	SOUTH LOBBY	
		2	-13	NORTH LOBBY	
		3	-16	LOBBY PENDANTS	
		4	SPARE		
	-02	1	-02	CLASSROOM 103	
		2	SPARE		
	-03	1	-01	CLASSROOM 102	
		2	SPARE		
	-04	1	-01	CLASSROOM 102	
		2	SPARE		
	-05	1	-03	CLASSROOM 106	
		2	SPARE		
	-06	1	-03	CLASSROOM 106	
		2	SPARE		
	-07	1	-04	CLASSROOM 109	
		2	SPARE		
	-08	1	-05	CLASSROOM 110	
		2	SPARE		
	-09	1	-10	CLASSROOM 112	
		2	SPARE		
	-10	1	-08	CLASSROOM 114	
		2	SPARE		
RP10	-01	1	-07	CLASSROOM 119A	
		2	SPARE		
	-02	1	-05	CLASSROOM 125	
		2	SPARE		
	-03	1	-01	THERAPY 124	
		2	SPARE		
	-04	1	-01	THERAPY 124	
		2	SPARE		
RP11	-05	1	-03	CLASSROOM 122	
		2	SPARE		
	-06	1	-02	CLASSROOM 120	
		2	SPARE		
	-07	1	-04	CLASSROOM 118	
		2	SPARE		
	-08	1	-06	CLASSROOM 116	
		2	SPARE		
RP12	-01	1	-11,13	ARENA 1	KEY OVERRIDE
RP12	-02	2	-07,08	ARENA 2	
		3	-04,19	ARENA 3	
		4	-03,23	ARENA 4	
		5	-01,21	ARENA 5	
		6	-06,12	ARENA 6	
		7	SPARE		
		8	SPARE		
		9	SPARE		
	-03	1	-18	A TV INDIRECT NORTH	KEY OVERRIDE
		2	-20	B TV INDIRECT NORTH	
		3	-32	C TV INDIRECT NORTH	
		4	-34	D TV INDIRECT NORTH	
		5	-30	E TV INDIRECT SOUTH	
		6	-16	F TV INDIRECT SOUTH	
		7	-36	G TV INDIRECT SOUTH	
		8	SPARE		
	-04	1	-28	H TV DIRECT NORTH	KEY OVERRIDE
		2	-24	I TV DIRECT NORTH	
		3	-26	J TV DIRECT NORTH	
		4	-22	K TV DIRECT NORTH	
		5	-14	L TV DIRECT SOUTH	
		6	-25	M TV DIRECT SOUTH	
		7	-27	N TV DIRECT SOUTH	
		8	-29	O TV DIRECT SOUTH	
RP13	-05	1	-02	SOUTH BALCONY 1	KEY OVERRIDE
		2	-09	SOUTH BALCONY 2	
		3	-02	SOUTH BALCONY 1	KEY OVERRIDE
		4	-09	SOUTH BALCONY 2	
	-06	1	-05	NORTH BALCONY 1	KEY OVERRIDE
		2	-13	NORTH BALCONY 2	
		3	-05	NORTH BALCONY 1	KEY OVERRIDE
		4	-13	NORTH BALCONY 2	
	-08	1	-11,13	ARENA 1	
		2	-07,08	ARENA 2	
		3	-04,19	ARENA 3	
		4	-03,23	ARENA 4	
		5	-01,21	ARENA 5	
		6	-06,12	ARENA 6	
		7	SPARE		
		8	SPARE		
RP13	-09	1	-18	A TV INDIRECT NORTH	
		2	-20	B TV INDIRECT NORTH	
		3	-32	C TV INDIRECT NORTH	
		4	-34	D TV INDIRECT NORTH	
		5	-30	E TV INDIRECT SOUTH	
		6	-16	F TV INDIRECT SOUTH	
		7	-36	G TV INDIRECT SOUTH	
		8	SPARE		
	-10	1	-28	H TV DIRECT NORTH	
		2	-24	I TV DIRECT NORTH	
		3	-26	J TV DIRECT NORTH	
		4	-22	K TV DIRECT NORTH	
		5	-14	L TV DIRECT SOUTH	
		6	-25	M TV DIRECT SOUTH	
		7	-27	N TV DIRECT SOUTH	
		8	-29	O TV DIRECT SOUTH	
RP13	-01	1	-29	RACQUETBALL COURT 161	KEY OVERRIDE
		2	-27	RACQUETBALL COURT 162	
		3	-25	RACQUETBALL COURT 163	
		4	-05	RACQUETBALL COURT 164	
		5	-09	RACQUETBALL COURT 165	
		6	-07	RACQUETBALL COURT 166	
		7	SPARE		
		8	SPARE		
	-02	1	-43,47	GYMNASIUM G1A	KEY OVERRIDE
		2	-51,55	GYMNASIUM G1B	
		3	-48,49	GYMNASIUM G2A	
		4	-44,57	GYMNASIUM G2B	
		5	-45,59	GYMNASIUM G3A	
		6	-46,53	GYMNASIUM G3B	
		7	SPARE		
		8	SPARE		
RP13	-03	1	-06	AEROBICS EAST	KEY OVERRIDE
		2	-08	AEROBICS CENTER	
		3	-08	AEROBICS WEST	
		4	SPARE		
	-04	1	-25	RACQUETBALL COURT 161	KEY OVERRIDE
		2	-27	MECHANICAL 320	
		3	-25	RACQUETBALL COURT 163	
		4	-05	RACQUETBALL COURT 164	
		5	-09	RACQUETBALL COURT 165	
		6	-07	RACQUETBALL COURT 166	
		7	SPARE		
		8	SPARE		
RP13	-05	1	-43,47	GYMNASIUM G1A	KEY OVERRIDE
		2	-51,55	GYMNASIUM G1B	
		3	-48,49	GYMNASIUM G2A	
		4	-44,57	GYMNASIUM G2B	
		5	-45,59	GYMNASIUM G3A	
		6	-46,53	GYMNASIUM G3B	
		7	SPARE		
		8	SPARE		
	-06	1	-11	STRENGTH ROOM SOUTH	
		2	-13	STRENGTH ROOM NORTH	
		3	SPARE		
		4	SPARE		
	-07	1	-11	FITNESS ROOM SOUTH	
		2	-13	FITNESS ROOM NORTH	
		3	SPARE		
		4	SPARE		
RP14	-08	1	-19,20,21,22	RUNNING TRACK	KEY OVERRIDE
		2	SPARE		
RP15					NO SWITCHES

LIGHTING RELAY PANEL 'RP11'						BUILDING: LIFETIME ACTIVITY CENTER					
						LOCATION: ROOM 170					
						CONTROL CIRCUIT: MEL-84, 120 VOLT					
RELAY NO.	PANEL	CKT #	VOLT	BRANCH CIRCUIT DESCRIPTION	CONTROL GROUP	RELAY NO.	PANEL	CKT #	VOLT	BRANCH CIRCUIT DESCRIPTION	CONTROL GROUP
1	MEL	1	120	ARENA 101 EMERG. QUARTZ RESTRIKE		2	MLB	27	120	GYM 190 QUARTZ FLOODS, WEST	
3	MEL	2	120	GYM 190 EMERG. QUARTZ RESTRIKE		4	MLB	28	120	GYM 190 QUARTZ FLOODS, CENTER	
5	MEL	3	120	ARENA 101 EMERG. QUARTZ RESTRIKE		6	MLB	29	120	GYM 190 QUARTZ FLOODS, EAST	
7	MEL	4	120	AEROBICS 176 EMERG. RESTRIKE		8	MLB	30	120	GYM 190 QUARTZ FLOODS, CENTER	
9				SPARE		10				SPARE	
11				SPARE		12				SPARE	
13				SPARE		14				SPARE	
15				SPARE		16				SPARE	
17				SPARE		18				SPARE	
19				SPARE		20				SPARE	
21				SPARE		22				SPARE	
23				SPARE		24				SPACE	
25				SPACE		26				SPACE	
27						28					
29						30					
31						32					
33						34					
35						36					
37						38					
39						40					
41						42					
43						44					
45						46					
47				SPACE		48				SPACE	

NOTE: PANEL 'RP11' SERVES EMERGENCY LIGHTING. RECONNECT EXISTING CONTROL CIRCUITS TO ACTIVATE LIGHTING UPON LOSS OF NORMAL POWER TO MATCH EXISTING CONDITIONS. FIELD VERIFY EXISTING CONTROL CIRCUITS.

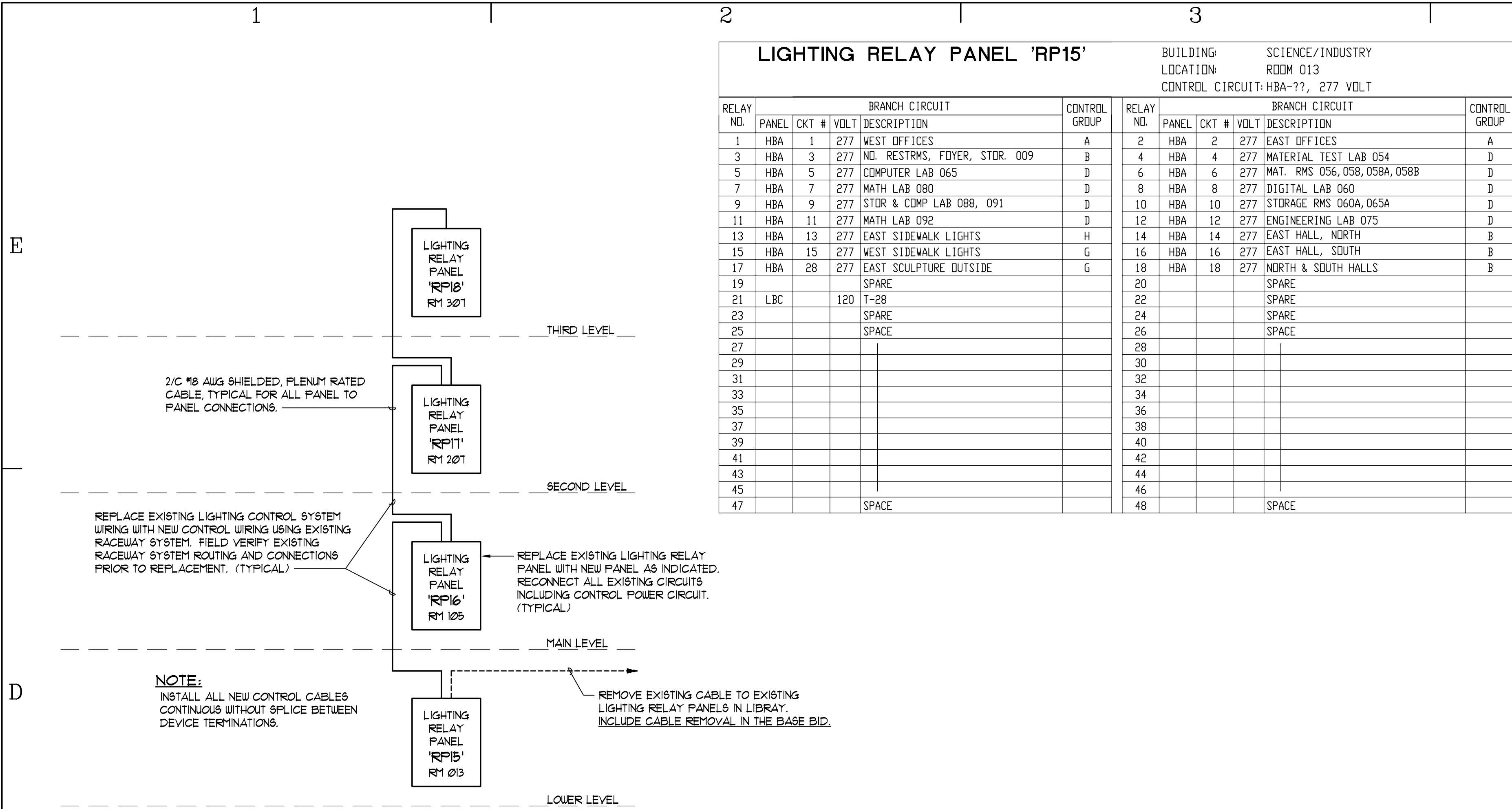
LIGHTING RELAY PANEL 'RP12'						BUILDING: LIFETIME ACTIVITY CENTER					
						LOCATION: ROOM 169					
						CONTROL CIRCUIT: MHB-31, 277 VOLT					
RELAY NO.	PANEL	CKT #	VOLT	BRANCH CIRCUIT DESCRIPTION	CONTROL GROUP	RELAY NO.	PANEL	CKT #	VOLT	BRANCH CIRCUIT DESCRIPTION	CONTROL GROUP
1	MHB	1	277	ARENA 5	E	2	MHB	2	277	SD BALCONY 1	E
3	MHB	3	277	ARENA 4	E	4	MHB	4	277	ARENA 3	E
5	MHB	5	277	N.D. BALCONY 1	E	6	MHB	6	277	ARENA 6	E
7	MHB	7	277	ARENA 2	E	8	MHB	8	277	ARENA 2	E
9	MHB	9	277	SD BALCONY 2	E	10				SPARE	
11	MHB	11	277	ARENA 1	E	12	MHB	12	277	ARENA 6	E
13	MHB	13	277	N.D. BALCONY 2	E	14	MHB	40	277	F-TV DIRECT SOUTH	E
15	MHB	15	277	ARENA 1	E	16	MHB	16	277	F-TV INDIRECT SOUTH	E
17				SPARE		18	MHB	18	277	A-TV INDIRECT NORTH	E
19	MHB	19	277	ARENA 3	E	20	MHB	20	277	B-TV INDIRECT NORTH	E
21	MHB	21	277	ARENA 5	E	22	MHB	22	277	K-TV DIRECT NORTH	E
23	MHB	23	277	ARENA 4	E	24	MHB	24	277	I-TV DIRECT NORTH	E
25	MHB	25	277	M-TV DIRECT SOUTH	E	26	MHB	26	277	J-TV DIRECT NORTH	E
27	MHB	27	277	N-TV DIRECT SOUTH	E	28	MHB	28	277	H-TV DIRECT NORTH	E
29	MHB	29	277	D-TV DIRECT SOUTH	E	30	MHB	30	277	F-TV INDIRECT SOUTH	E
31				SPARE		32	MHB	32	277	C-TV INDIRECT NORTH	E
33				SPARE		34	MHB	34	277	D-TV INDIRECT NORTH	E
35				SPARE		36	MHB	36	277	G-TV INDIRECT SOUTH	E
37				SPACE		38				SPACE	
39						40					
41						42					
43						44					
45						46					
47				SPACE		48				SPACE	

NOTE: RELAY PANEL 'RP13' MAY BE FURNISHED AS ONE 48 RELAY CABINET AND ONE 12 RELAY CABINET WHERE MANUFACTURER'S STANDARD CABINETS ARE NOT AVAILABLE. IN MINIMUM 60 RELAY CONFIGURATION.

LIGHTING RELAY PANEL 'RP13'						BUILDING: LIFETIME ACTIVITY CENTER					
						LOCATION: ROOM 169					
						CONTROL CIRCUIT: MHA-32, 277 VOLT					
RELAY NO.	PANEL	CKT #	VOLT	BRANCH CIRCUIT DESCRIPTION	CONTROL GROUP	RELAY NO.	PANEL	CKT #	VOLT	BRANCH CIRCUIT DESCRIPTION	CONTROL GROUP
1	MHA	1	277	LOBBY, HALL 100D, & RMS 150-155	B	2	MHA	2	277	CHILLER ROOM 168 & STORAGE 174	C
3	MHA	3	277	ROOMS 156 THRU 160, LOBBY 100K	B	4	MHA	4	277	CORRIDOR 100E	B
5	MHA	5	277	RACQUETBALL ROOM 164	F	6	MHA	6	277	AEROBICS 176 EAST	F
7	MHA	7	277	RACQUETBALL ROOM 166	F	8	MHA	8	277	AEROBICS 176 CENTER	F
9	MHA	9	277	RACQUETBALL ROOM 165	F	10	MHA	10	277	AEROBICS 176 WEST	F
11	MHA	11	277	STRENGTH ROOM 193	D	12	MHA	12	277	FITNESS 191	D
13	MHA	13	277	STRENGTH ROOM 193	D	14	MHA	14	277	FITNESS 191	D
15	MHA	15	277	OUTSIDE SOFFIT, MIDDLE EAST	H	16	MHA	16	277	OUTSIDE SOFFIT	H
17	MHA	17	277	OUTSIDE SW	H	18	MHA	18	277	SOUTH MECHANICAL ROOM 301	C
19	MHA	19	277	RUNNING TRACK WEST	F	20	MHA	20	277	RUNNING TRACK SOUTH	F
21	MHA	21	277	RUNNING TRACK NORTH	F	22	MHA	22	277	RUNNING TRACK EAST	F
23	MHA	23	277	EAST MECHANICAL 195 & HALL 100J	B	24	MHA	24	277	OUTSIDE WEST	G
25	MHA	25	277	RACQUETBALL ROOM 163	F	26	MHA	26	277	OUTSIDE WEST	G
27	MHA	27	277	RACQUETBALL ROOM 162	F	28	MHA	28	277	OUTSIDE EAST	H
29	MHA	29	277	RACQUETBALL ROOM 161	F	30	MHA	30	277	OUTSIDE EAST	H
31	MHA	31	277	CONFERENCE 155	A	32				SPARE	
33				SPARE		34	MHA	34	277	ARENA NORTH WALL	
35				SPARE		36				SPARE	
37				SPARE		38				SPARE	
39				SPARE		40				SPARE	
41				SPARE		42				SPARE	
43	MHA	43	277	GYMNASIUM G1A	F	44	MHA	44	277	GYMNASIUM G2B	F
45	MHA	45	277	GYMNASIUM G3A	F	46	MHA	46	277	GYMNASIUM G3B	F
47	MHA	47	277	GYMNASIUM G1A	F	48	MHA	48	277	GYMNASIUM G2A	F
49	MHA	49	277	GYMNASIUM G2A	F	50				SPARE	
51	MHA	51	277	GYMNASIUM G1B	F	52				SPARE	
53	MHA	53	277	GYMNASIUM G3B	F	54				SPARE	
55	MHA	55	277	GYMNASIUM G1B	F	56				SPARE	
57	MHA	57	277	GYMNASIUM G2B	F	58				SPARE	
59	MHA	59	277	GYMNASIUM G3A	F	60				SPARE	

NOTE: RELAY PANEL 'RP13' MAY BE FURNISHED AS ONE 48 RELAY CABINET AND ONE 12 RELAY CABINET WHERE MANUFACTURER'S STANDARD CABINETS ARE NOT AVAILABLE. IN MINIMUM 60 RELAY CONFIGURATION.

LIGHTING RELAY PANEL 'RP14'						BUILDING: LIFETIME ACTIVITY CENTER					
						LOCATION: ROOM 180					
						CONTROL CIRCUIT: NWH-24, 277 VOLT					
RELAY NO.	PANEL	CKT #	VOLT	BRANCH CIRCUIT DESCRIPTION	CONTROL GROUP	RELAY NO.	PANEL	CKT #	VOLT	BRANCH CIRCUIT DESCRIPTION	CONTROL GROUP
1	NWH	1	277	WOMEN'S LOCKERS 181,181A,181B	B	2	NWH	2	277	MEN'S LOCKERS 185	B
3	NWH	3	277	WOMEN'S LOCKERS 181C,183	B	4	NWH	4	277	MEN'S LOCKERS 187,187A,187B,187C	B
5	NWH	5	277	NORTHEAST OUTSIDE SOFFIT	H	6	NWH	6	277	LAUNDRY 178, STORAGE 176A	B
7	NWH	7	277	MECHANICAL 320	C	8				SPARE	
9	NWH	9	277	2ND FLDR ROOMS	B	10	NWH	10	277	NORTHWEST HALLS 100F,100G,200D	B
11	NWH	11	277	2ND FLDR HALLS	B	12	NWH	12	277	NORTHEAST HALLS 100G,100H,200E	B
13	NWH	13	277	NORTHWEST OUTSIDE SOFFIT	H	14	NWH	14	277	CORRIDOR 7	B
17	NWH	15	277	STORAGE 182, FACULTY LOCKERS 184	B	16				SPARE	
19				SPARE		18				SPARE	
21				SPARE		20				SPARE	
23				SPARE		22				SPARE	
25				SPACE		24				SPARE	
27						26				SPACE	
29						28					
31						30					
33						32					
35						34					
37						36					
39						38					
41						40					
43						42					
45						44					
47				SPACE		46					
						48				SPACE	



4

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LIGHTING RELAY PANEL 'RP16'						BUILDING: SCIENCE/INDUSTRY	
						LOCATION: ROOM 105	
						CONTROL CIRCUIT: H1A-25, 277 VOLT	
RELAY NO.	BRANCH CIRCUIT					CONTROL GROUP	
	PANEL	CKT #	VOLT	DESCRIPTION			
1	H1A	17	277	EAST CORRIDORS, RESTRMS 161, 163		B	
3	H1A	19	277	WEST CORRIDORS		B	
5	H1A	21	277	SOUTH EXTERIOR WALL PACKS		H	
7	H1A	23	277	RM 100C BULLITIN BOARDS		B	
9				SPARE			
11				SPARE			
13				SPACE			
15							
17							
19							
21							
23				SPACE			

RELAY NO.	BRANCH CIRCUIT					CONTROL GROUP	
	PANEL	CKT #	VOLT	DESCRIPTION			
2	H1A	20	277	N.W. ENTRANCE SOFFIT LIGHTS		H	
4				SPARE			
6				SPARE			
8				SPARE			
10	LIC	32	120	DOOR OPENER ?		B	
12				SPARE			
14				SPACE			
16							
18							
20							
22							
24				SPACE			

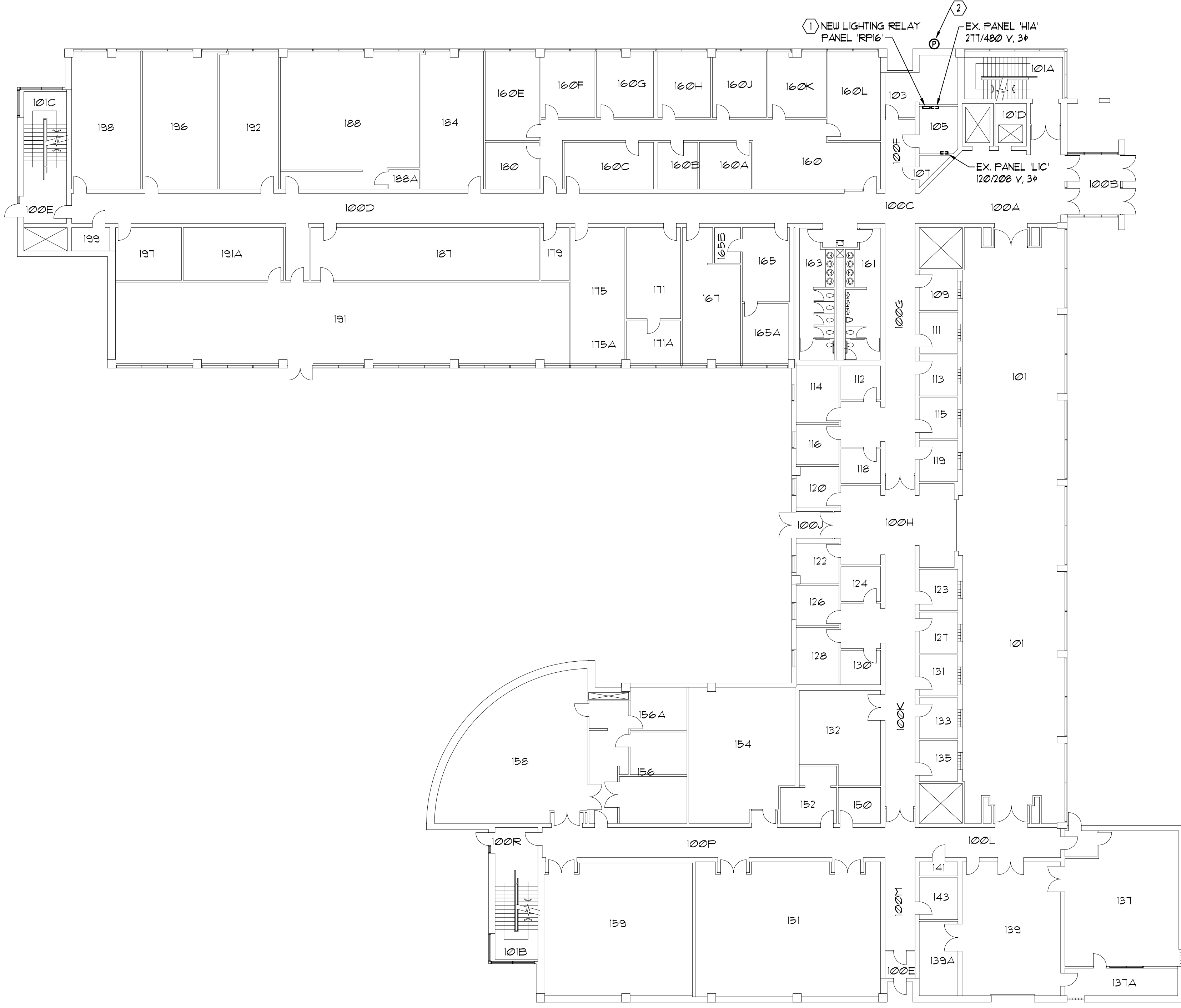
SCIENCE/INDUSTRY CONTROL CHANNEL SCHEDULE

CHANNEL	GROUP	DESCRIPTION	ON CONTROL	OFF CONTROL	BLINK WARN	TIMED OVERRIDE	NOTES
A		OFFICES	CLOCK	CLOCK	NO	N/A	1, 2
B		CORRIDORS/COMMON AREAS	CLOCK	CLOCK	NO	N/A	1, 2
C		UTILITY ROOMS	CLOCK	CLOCK	NO	N/A	1, 2
D		CLASSROOMS/LABS	CLOCK	CLOCK	NO	N/A	1, 2
E		GALLERY	CLOCK	CLOCK	NO	N/A	1, 2
F		RESERVED					
G		EXTERIOR LIGHTING	PHOTOCELL	CLOCK			1
H		EXTERIOR LIGHTING	PHOTOCELL	PHOTOCELL			

SCIENCE/INDUSTRY LIGHTING CONTROL SYSTEM RISER DIAGRAM



SCIENCE/INDUSTRY LOWER LEVEL ELECTRICAL PLAN



A

SHEET 11 OF 12

SCIENCE/INDUSTRY SECOND LEVEL ELECTRICAL PLAN
 SCALE: 1/16" 1"=0'



A4 SCIENCE/INDUSTRY THIRD LEVEL ELECTRICAL PLAN
SCALE: 1/16" = 1'-0"



